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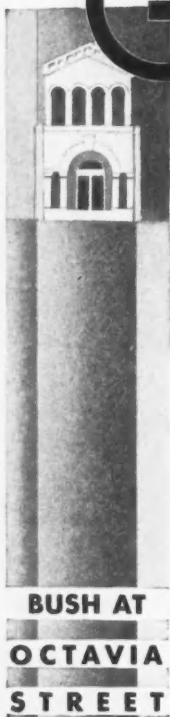
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VOLUME XXXVI

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CHRONIC POLYARTHRITIS—ITS GROUP TREATMENT*

By REA SMITH, M. D.
Los Angeles

DISCUSSION by James T. Watkins, M. D., San Francisco;
Rodney F. Atsatt, M. D., Santa Barbara.

THIS discussion of group treatment of arthritis deals entirely with that class of patients who have multiple joints affected chronically, and ordinarily known as the atrophic, the hypertrophic, or the chronic infectious types of arthritis.

The routine examination of teeth, tonsils, pelvic organs, and the prostate for acute and single joints has become general practice and, of course, always should be done in chronic cases; but the attempt at relief of the chronic multiple arthritis by the removal of tonsils and teeth or the massage of the prostate has been very disappointing.

INTESTINAL ORIGIN

We start with the premise that arthritis of the type under discussion is of intestinal origin. Whether it be a bacterial toxin or metabolic end-product, due to the bacterial digestion in the colon, makes very little difference, to my mind, in determining a rational treatment. We place the blame upon the ileocecal coil, which fails to function properly. With the slowing of the stream in this region, a change takes place in the relation of the different elements of the flora, and with this change a poison develops which results in chronic inflammation of the joints. The most frequent pathologic change in the right iliac fossa accompanying arthritis is a toneless, blue cecum, which fails to empty. This condition (the atonic cecum) has been treated surgically by removal, side-tracking, plication, and fixation, the procedure depending upon the operator's own idea of the lesion with which he was dealing. Of these types of treatment, removal has been attended by more immediate risk to the patient, but has produced the best symptomatic results. However, we feel that removal or side-tracking is rarely necessary, and that fixation or plication too frequently fails to relieve the condition for which it is done.

Harvey¹ outlines four main subdivisions in the journey which the cecum makes from its inception to its final lodgement in the right iliac fossa, namely, *migration, rotation, descent, and fixation*.

"In the fifth week of fetal life the primitive gut is attached to the umbilicus; the cecum beginning to

show as a bud on the caudal portion of the gut. As the liver at this stage rapidly increases in size, the bowel is pushed out of the coelum into the umbilicus. Next the relative increase in size of the body cavity permits the return of the gut. The small intestine is the first to return, the large bowel follows. The junction of the small bowel with the large is forced by the small intestine into the upper right quadrant, and at this stage the small intestine enters the large from the right and above. This ends the migration.

"The next stage is that of *rotation*, resulting in the entrance of the small bowel on the inner side, or from the left and below.

"*Descent* starts at this point, and in the latter months of fetal life and first month after birth the growth of the organ carries it and the ileocecal valve into the lower right quadrant.

"*Fusion* of the various mesenteries results in the position which is termed normal in the adult life. It is well to note that the descent and fusion are relatively late stages in the developmental cycle. Studies in comparative anatomy would indicate that fusion is doubtless a result of the assumption of the erect posture of mankind, and it is just to suppose that on the success of these last two processes will depend to a considerable extent the ability of the bowel to function properly."

INTESTINAL MECHANISM

The external longitudinal muscle fibers of the colon are gathered into three distinct longitudinal muscular bands, which lift the cecum many inches in a so-called normal ascending colon, pulling from the first fixed point, the hepatic flexure, and are largely concerned in the normal mechanism of emptying the cecum.

The intestinal wall carries within itself the mechanism essential to peristalsis. The law of peristalsis of Bayliss and Starling was worked out experimentally on a dog, with a balloon in the small intestine attached to a manometer. It was demonstrated that pinching the intestine just above the balloon caused a cessation of peristaltic activity and a dilatation of the intestine from eight to twelve inches below the pressure; that pinching of the intestine behind the balloon caused a spasticity and great increase in peristalsis ahead of the pressure. Our observation reverses this process in the colon. In other words, pressure upon a ganglion contained in the wall of the colon causes dilatation behind the spasticity in the front. This is our conception of the production of the thin-walled, blue atonic cecum. With a mobile cecum and ascending colon, due to faulty fusion, the terminal event in the embryologic cycle, we have the ideal condition for the development of a long chain of events. Beginning with loss of tone, due either to advancing years, a long strain or a long physical illness, we have a loss of the lumbar curve, which is the shelf on which the normal cecum lies. With the loss of

* Read before the General Surgery Section of the California Medical Association at the sixtieth annual session, San Francisco, April 27-30, 1931.

the lumbar shelf, we have a tendency of the cecum to prolapse. Nature in her effort to lift up a prolapsing organ starts the growth of a membrane at the site of the right colic artery on the mesenteric side, which attaches the colon tightly to the side wall by a reduplication of the peritoneum. (This was first described by Jackson many years ago and is generally known as "Jackson's membrane.") As this attachment becomes tighter, the colon is rolled to the right and twisted, the prolapsing heavy cecum swings forward and to the left, exaggerating the twist. This twist so pinches the intestinal wall containing Auerbach's plexus that cecal dilatation with lack of peristalsis follows, and a spastic colon forward from the point of pressure develops. This paralysis of the cecal muscular walls, due, as we think, to plexus pressure, is at first intermittent, occurring when the patient is erect and disappearing when prone, making it easy to miss, either in routine x-ray examination or on the operating table.

We feel that here we have the formation of a vicious circle. As the cecum becomes heavier the strain increases at its point of fixation, a pericolic inflammation due to strain tightens the band, so that eventually the obstruction may become anatomical as well as physiological. There is often a retrocecal appendix, in many cases an undescended appendix which draws the cecum sharply up to the right, so that that part of the intestine which appears to be cecum in the x-ray study is really the middle of the ascending colon. This, the retrocecal appendix, is usually included in the adventitious attachments of the ascending colon.

Actual mechanical fixation of any part of the cecum or ascending colon interferes with the direct pull on the longitudinal bands from the normal fixed point at the hepatic flexure, and so prevents the lifting of the cecum.

CLINICAL BASIS FOR VIEWPOINT

This theory is based largely on deductions from clinical observation at the operating table and in the x-ray laboratory. We have demonstrated many times that this toneless cecum, unhaustated, dilated, and thin-walled, appearing to have no muscle, is capable of an immediate return in color, thickness and peristaltic activity. This immediate return of peristalsis upon removal of the plexus pressure must disprove the theory of Lane that the cecum has become toneless through atrophy of muscle from hydrostatic pressure, and the theory that the muscle has atrophied through trophic changes from long toxemia. Also this disproves the theory of ordinary anatomical intestinal obstruction in the ascending colon. For in all parts of the intestinal tract a simple partial anatomical obstruction gives rise to increased peristaltic activity and hypertrophy behind, rather than atony and dilatation.

With the colon pulled tightly to the left, the assistant holding the flexure in one hand and the cecum in the other, the reduplicated peritoneum

is divided with a sharp knife at the white line, which marks its junction with the parietal peritoneum, the ascending colon immediately becomes straight. The edges of the longitudinal incision in the peritoneum are separated four or five inches by the rolling out of the colon, which has been compressed over the right kidney. The cecum immediately draws up, regains its pink color, and contracts when pinched between the gloved finger and thumb. We plant in this denuded area a free omental graft, carefully stitching the omental edge to the edge of the peritoneal incision. Interposition of tissue apparently prevents reformation of the constricting membrane, as we have never reoperated one for adhesions in a series of about three hundred cases scattered over a period of twelve years.

These typical cases, with the mid-portion of the ascending colon rolled to the right and attached to the parietal peritoneum, would seem ideal for cecal fixation to prevent descent and twist.

We have been unable to find a method of fixation which may not defeat its own object by interfering with peristaltic waves which are necessary for the emptying of the cecum, and prefer to reproduce the mobile cecum and depend upon external support to prevent the band from re-forming.

Our experience has taught us that the prolapsed cecum is comparable to the prolapsed stomach—it will empty from any position if the whole organ prolapses and if peristalsis is not interfered with by some other cause than position.

CECAL STASIS

The clinical manifestations of cecal stasis are varied and far-reaching. We proceed on the theory that chronic polyarthritis is caused by the absorption of bacterial toxin or improper metabolic end-products due to an unbalanced ileocecal flora dependent upon an ileocecal stasis, with an occasional shower of bacteria from the same source. We have found that it is almost impossible to change the flora to a normal relationship between the Gram-negative and the Gram-positive bacteria in the face of a mechanical cecal block. We have found, also, that after removing the block, the same dietary treatment, based upon the bacterial examination of the stool, which failed to influence either the flora or the symptoms before operation will slowly change the flora back to normal, and the disappearance of the pain, stiffness, and contraction of the arthritic joints goes hand in hand with laboratory reports upon the flora. This, however, has taken from fourteen months to two years and has been a long pull for both the patient and the doctor, and has necessitated constant observation of the patient.

ROUTINE EXAMINATION

The routine examination and treatment which we have developed is somewhat as follows:

First.—We first investigate and clear up the ordinary sources of focal infection, such as teeth, tonsils, sinuses, and pelvis;

Second.—We use gastro-intestinal x-ray for mobility and motility of the intestinal tract, especial attention being given the ileocecal coil;

Third.—We place the patient on a balanced diet for forty-eight hours so that we may maintain as far as possible the same conditions to have a standard for comparison, and have a stool smear made of a freshly collected specimen on the morning of the third day.

If the stool examination shows an unbalance on the Gram-negative or Gram-positive side, and the x-ray has shown no gross pathology, we institute a medical regimen designed to restore a normal intestinal flora. We attempt to restore the lumbar curve; fit an abdominal belt; have patients sleep with the shoulders low and encourage the cecum to stay up to prevent the parasympathy by twist. Our experience has taught us that it is a waste of time to try the medical regimen in the face of a distinct cecal block and prolonged stasis. We do the surgery first in these cases and then start the same medical treatment as an after-surgical treatment.

The Schellberg apparatus with which the tube can easily be passed to the cecum, the colon thoroughly washed and acidophilus culture implanted into the cecum has been very useful in restoring the muscle tone to the bowel and insuring elimination and also in more rapidly changing the flora.

THE RÔLE OF INTESTINAL FLORA

The recent work of Dorst and Morris on "Bacterial Hypersensitivity of the Intestinal Tract—Its Treatment with Autogenous Vaccine and Sodium Ricinoleate" gives us our first real hope of having a definite procedure with which to combat the toxins from the intestinal tract.

The greatest problem has been to shorten the period of time necessary to restore the flora to normal after adequate drainage of the bowel has been established, and to relieve these patients of their toxic load. I feel, however, even if it should be possible to detoxicate the intestinal contents and to desensitize the patient with vaccine, it is still necessary, in order to obtain a permanent result, to restore bowel function and eventually restore normal relation between the various elements of the intestinal flora. When the stool has become normal and the joints have become cold these patients need corrective procedures. In this state any type of operation or manipulation can be done without reaction, but it is necessary to be very careful to be sure that the disease is quiescent before starting any reconstructive work. The joints that have given the greatest difficulty in getting motion have been those deliberately fixed by plaster casts, upon the assumption that arthritis was an incurable disease and that a straight leg, stiff, was better than a bent one.

GROUP SUPERVISION ESSENTIAL

It is impossible, as you can readily see, for any one man to carry on this regimen with a group of patients. It is almost necessary to have a patient in an institution equipped with a large modern bacteriological laboratory; an orthopedic

department; a dietary department; an x-ray department; a physiotherapy department, including a Schellberg apparatus; an operating room—all manned by a staff trained in the special direction of each of these departments.

There are many metabolic clinics at the present time scattered over the country for the treatment of chronic arthritis, but so far as I know, none of them combine routinely a thorough gastro-intestinal examination and abdominal surgery, when it is indicated, as part of their routine treatment. In my opinion the disappointment will be greatly lessened when these two procedures are added to the generally accepted routine treatment of these patients.

1215 Wilshire Medical Building.

REFERENCE

1. Payne, R. A., and Trahar, F. C.: Developmental Rests in Cecum and Ascending Colon and Their Röntgen-ray Diagnosis, *Am. J. Röntgen*, 8:643, 1921.

DISCUSSION

JAMES T. WATKINS, M. D. (909 Hyde Street, San Francisco).—I shall not, in the very few minutes at my disposal, attempt to debate the debatable questions in Doctor Smith's interesting paper.

In the very meager synopsis of Doctor Smith's paper, upon which I must predicate my remarks, this sentence attracts me: "No one system of treatment cures on account of the many elements involved; necessitating routine combination of radiology, laboratory, abdominal surgery, medical treatment, diet, and physiotherapy, followed by expert orthopedic procedure to restore function to crippled joints after the active process has subsided." Now the only reason that I can think of why Doctor Smith should have said that all other treatment should be followed by orthopedic procedure must be that he does not get patients in the earlier stages of the disease. As a matter of fact, you can do vastly more in preventing deformity than you can in correcting deformity which has already been established. I think it cannot be brought home too forcibly to the medical attendant that the obligation and responsibility is his to see to it that these persons early in their disease are made to maintain those postures which make for maximum efficiency of the individual joints and of the organs of the body as a whole.

There is no chance for me in these four or five minutes to debate this question fully. I can only assert dogmatically that these chronic arthritides, which are nearly always of the so-called "atrophic type," occur in individuals who are regularly congenital enteroptotics; they have throughout the posture of fatigue, round shoulders, acutely hollow backs, sloped ribs, narrow intercostal angles, and the like—an attitude in which the lungs are not properly aerated, the heart working in a restricted pericardial area, the large bowel being suspended in a loop, the stomach, instead of lying in a frontal plane, hanging in a more or less perpendicular one.

The early-stage treatment of these individuals implies rest and raising their resistance by all the means at our command, one of which is getting the body gradually into that position in which its organs are known to function best.

Where you have an arthritic spine the tendency is for these patients gradually to lean forward more and more, exaggerating their curves, in which position they ultimately become stiff.

Where you have to deal with involvements of the upper extremity, experience has taught us that the shoulder should not be maintained in the position which obtains when you hold your arm in a sling. It should be supported on sandbags in ninety degrees of abduction, and full external rotation. You get a minimum of contraction in the soft parts in this way. If there is danger of the shoulder becoming anky-

losed, a very rare condition, it should be maintained in seventy degrees of abduction, forty-five degrees of forward flexion, and with the thumb in the mid-position.

The elbow is best maintained in light plaster of paris gutters, well padded, fully extended at night. In the daytime it can be left free. It should not be allowed to become stiff. In those rare cases when this would occur at less than ninety degrees of flexion the position should be corrected.

The wrist tends, as you know, to slump in ulnar deviation and also in palmar flexion. Both of these should be corrected at the start or should be anticipated by maintaining the wrist in a light aluminum splint in slight radial deviation and thirty degrees of dorsiflexion.

The hand shows a tendency to become flat, a condition analogous to spastic flatfoot. You can control this by a strap around the metacarpal bones.

The fingers are very common seats of deformity. I have not time to describe them except to say that every deformity that you can think of is possible at every joint. The fingers then should be splinted at night, and your working problem is to splint them in whatever way is indicated to oppose the tendency present toward deformity. During the daytime they can be left free.

Deformities occur in the hip in the sense of internal rotation, flexion, and adduction. The curative factor here is the removal of weight-bearing. You may have to use traction; you may have to use plaster of paris. If you use the latter, have it bivalved so that your physiotherapist can get in there with her lights and her massage and keep the tone of your muscles up. Operation may have to be resorted to, but not until the inflammatory process has been well for two years.

After arthritis of the fingers, arthritis of the knee, with shortening by flexion of it, is the most frequent manifestation of the disease. It may go on to permanent shrinkage of the hamstrings and of the posterior capsule. It should be prevented by using plaster of paris cast bivalved in 175 degrees of extension; again rest in bed is the great curative factor; avoid working with a bent knee.

The foot and ankle, where we have to deal with arthritis involving any of the smaller joints and very frequently the joint of the great toe, should be immobilized in slight supination and right-angle dorsiflexion, together with the removal of weight-bearing. After the inflammatory process has subsided, you can use manipulations to clear the thing up or, in the hypertrophic varieties, you may have to do some bone plastic work.

But what I am trying to say here is that it is the responsibility of the man who sees these persons first to recognize that if they are to avoid serious crippling disease, they must be treated in a posture which prevents the deformity with which the late-appearing orthopedic surgeon shall struggle with, at best, indifferent success.

✱

RODNEY F. ATSATT, M. D. (1421 State Street, Santa Barbara).—Doctor Smith's conception of one of the causes of arthritis is eminently sound. There can be no question but what a considerable percentage of our arthritides have intoxication from the gastrointestinal tract as an etiologic factor. Whether these toxic materials are due to incomplete splitting of proteins, whether they are endotoxins or exotoxins from bacterial growth, or whether there is actual entrance into the blood stream of the bacteria themselves, is a much discussed question. Be that as it may, the bowel is undoubtedly responsible for certain arthritic conditions and the author's excellent and careful observations as well as his unique operative procedure are especially valuable to those of us who have to do with these chronic patients.

In agreement with Doctor Watkins, may we again make the plea that orthopedic surgeons and their physiotherapists be called in early in arthritic cases and their calling not be delayed until after well-nigh irreparable damage has been done to joints, capsules, ligaments, and muscles.

GOITER—RECENT ADVANCES IN ITS TREATMENT*

By CARL L. HOAG, M. D.
San Francisco

DISCUSSION by W. I. Terry, M. D., San Francisco; Clarence G. Toland, M. D., Los Angeles; Ralph T. Richards, M. D., Salt Lake City; A. B. Cooke, M. D., Los Angeles.

THE cause of goiter is still unknown. Recently Shivers¹ sent out a questionnaire to the world's authorities and received forty-three replies. These indicate only too plainly that the data are insufficient from which to draw definite conclusions.

ETIOLOGY

However, most authorities accept the hypotheses that lack of iodine or infectious processes, or both, are of primary importance in the etiology of goiter, with psychic trauma, sex imbalance, heredity, food, and water supply ranking as secondary factors.

In addition, most authorities agree with Marine² that the lack of iodine is the principal factor in endemic goiter and that its use early in life or by the pregnant mother will prevent the disease. Just how prophylaxis should be carried out has been the subject of much controversy because some types of goiter, usually the adenomata, already existing, may be made toxic by the use of iodine. However, it would seem that this danger has been greatly overemphasized; Collier and Potter³ were unable to find a single case of thyrotoxicosis traceable to the prophylactic use of iodized salt, although reports from Switzerland, where iodine has been placed in the water supply, seem to show that there has been an exacerbation of some goiters which can be traced directly to its use. I have found it satisfactory to give small doses of iodine in any of its forms during alternate months on the hypothesis that, if too much is stored, the excess will be eliminated during a free period. Iodized salt and the syrup of iodide of iron are tolerated especially well by children.

FUNCTION OF THE THYROID GLAND

The function of the thyroid gland is iodine metabolism. Whether the lack of iodine causes a physiologic and functional alteration of the gland or allows some infectious process to do it is debatable. It is well known, however, that the administration of iodine does modify the course of many infectious processes such as syphilis and actinomycosis and, if goiter is caused by some specific infection, as is believed by Crotti⁴ and others, the beneficial effect of iodine upon goiter may be, partly at least, due to this action.

The hypothesis that an infection, or infections, together with iodine deficiency causes hyperplasia of the thyroid gland is, perhaps, stronger today than ever before. While some believe in a specific bacterium or fungus as yet not isolated, the ma-

* Read before the General Surgery Section of the California Medical Association at the sixtieth annual session, San Francisco, April 27-30, 1931.

jority of writers lean toward the opinion that ordinary infections or their toxins are the usual causes. Some degree of thyroiditis is found in nearly every hyperplastic goiter. It varies from a mild round-cell infiltration to a fulminating infectious process which destroys the gland. Even in those cases showing the greatest degree of thyroiditis there is evidence of hyperthyroidism, and the clinical symptoms usually are benefited by the use of iodine in direct ratio to the amount of regeneration present.

Two hypotheses have been advanced to explain the temporary remission of symptoms usually obtained by the use of iodine in hyperplasias of the thyroid. Marine⁸ advances the idea that the thyroid cells are stimulated to secrete colloid which fills the acini and compresses the lining cells, lessening the production of thyrotoxin, so that the patient shows a clinical improvement. As the cells adjust themselves to the new condition, the amount of thyrotoxin is again increased. The continued use of iodine exhausts the colloid-producing power of the cells and degeneration takes place, but the production of thyroxine continues. Plummer's⁹ theory regards exophthalmic goiter as a dysthyroidism which is converted into a pure hyperthyroidism in the presence of iodine. Whatever may prove to be the correct answer to the problem, nearly all authors agree that the remission of symptoms caused by the use of iodine is temporary and cannot be regarded as a cure. Following Plummer's⁹ idea, and the experience of others also, the preoperative use of iodine has been restricted largely to the treatment of hyperplastic goiter because benign adenomas were thought to be made toxic and toxic adenomas more toxic by its use. Coller and Potter³ have treated a relatively large series of cases of hyperplasia and adenoma, using the same dose of iodine in each group. They conclude that, while 88.3 per cent of the patients with hyperplasia were benefited, as we would expect, 54 per cent of the patients with adenomata also showed definite improvement. From these figures it would seem that more than half of the adenomatous group (the diagnosis was proved at operation later) had hyperplasia present, which responded to the iodine therapy, or that some adenomata actually are improved by iodine.

A possible explanation may be found in Allen Graham's⁴ views. Recently he challenged Wollfer's accepted theory that adenomata arise from embryonal cell rests, on the grounds that no such fetal cells can be found and that the process can be explained as rationally by a localized hyperplasia and involution with atrophy of the surrounding thyroid tissue to form the capsule. Nodular hyperplasia might, then, be an intermediary stage in the development of the adenoma. If this can be proved, it will be evidence of the common origin of two types of goiter usually thought to be quite different. The recognition that hyperplasia may exist in a thyroid gland largely replaced by adenomata also may be taken as evidence of a closer relationship, but a different state of development.

TREATMENT

Any agent which will destroy the superabundance of the hyperplastic goiter and restore the thyroid balance will effect a clinical cure. Boiling water or caustic drug injections, radiation or surgery may be used; but so far surgery has been the most satisfactory means of promptly checking the progress of the disease.

Operative Technique.—The operative technique of thyroidectomy has been standardized so well that little need be said about it except to emphasize four points:

1. The amount of thyroid tissue removed will determine the result. A review of large numbers of cases by Austin and Wagner,¹⁰ by Willard Thompson¹¹ and by Else¹² shows that recurrences are invariably the result of the removal of too small an amount of gland. Every case, therefore, must be individualized and the experience of the surgeon and his judgment, based upon clinical and laboratory findings, will determine the result. Following a subtotal thyroidectomy, the administration of iodine may prevent the recurrence of hyperplasia and keep the basal metabolic rate down. If too large an amount of the gland has been left, however, the use of iodine may seem to restore the thyroid balance, while in fact a latent thyrotoxicosis exists.

2. Preservation of the parathyroids is important. Millzner⁷ has shown that in 30 per cent of patients one or more parathyroids lie on the anterior or lateral capsule. Preservation of this capsule will prevent tetany or parathyroid insufficiency.

3. In large adenomatous goiters the preservation of the capsule not only saves the parathyroids but, as well, whatever normal thyroid tissue remains outside these tumor masses. This is especially true in those patients exhibiting signs or symptoms of hypothyroidism. Regeneration of this capsular tissue may be sufficient, after operation, to bring the basal rate back to normal.

4. Well placed symmetrical incisions, which heal by primary intention, leaving only hair-line scars without suture or clip marks, are a source of lifelong satisfaction to the patient as well as to the surgeon. Accurate closure of the platysma, approximation of skin edges, and drainage only in exceptional cases, add much to the cosmetic result.

Radiation.—Radiation of adenomata may bring the basal metabolic rate within or below normal limits, but the symptoms and signs of thyrotoxicosis do not disappear. A similar condition is seen frequently in patients, with untreated adenomas, whose basal metabolic rates are normal or subnormal though they have toxic symptoms. Apparently encapsulated adenomatous tissue has a greater resistance to radiation than normal or hyperplastic gland, and if radiation is carried far enough to destroy the adenoma itself, all other parts of the gland also will be destroyed.

Radiation of hyperplasia is at times most satisfactory. Some of these patients undoubtedly are cured. Upon others, radiation has little or no

effect or, if there is any reduction of the basal metabolic rate, it is too slow to prevent permanent cardiovascular and nervous changes from taking place. There are, however, certain cases of low-grade hyperplasia which, in my opinion, can be treated with good results by the use of roentgen therapy. If the basal metabolic rate is below plus 30, the clinical picture mild, and there seems to be no indication of a rapid exacerbation, radiation is quite satisfactory. Frequently, however, these apparently mild cases increase in symptom complex and basal metabolic rate even under x-ray therapy. In this event such therapy should be discontinued, as surgery will give a much more satisfactory and permanent result. It must be remembered, however, that if a subtotal thyroidectomy is done after radiation, usually more tissue should be left than in the case of an unirradiated gland.

Malignancy.—Carcinoma of the thyroid is relatively rare, occurring only in from one to two per cent of all thyroid patients treated surgically. Approximately 85 per cent definitely arise in adenomata. The disease progresses rapidly and the mortality is very high. The average length of life after the diagnosis has been made, as calculated by Ward and Carr,⁸ is one year and two months. For those patients whose diagnosis is first made at the time of operation or in the pathological laboratory the average duration of life is two and one-half years.

For those upon whom a diagnosis of carcinoma has been made in the laboratory after incomplete removal of the thyroid gland, the question of future treatment arises. I think most surgeons will agree that an early secondary operation at which all the involved tissue is removed, followed by radium or roentgen therapy, offers the best chance of cure.

Certain cases of thyroiditis showing areas of regeneration have been diagnosed as malignancies. Clinically the two conditions are quite different. A malignancy usually arises from an adenoma and spreads from a definite point, involving all tissues alike. The remainder of the thyroid is not involved. On the other hand, thyroiditis which is sufficiently advanced for clinical diagnosis usually involves both lobes and the isthmus in almost an equal degree. The lobes are hard, with rounded edges and angles, so that the gland moves as a whole and tenderness invariably is present at some stage of the disease. The treatment of malignancy must be radical surgery; that of thyroiditis may be watchful waiting, with conservative surgery if it is indicated.

Parathyroid Insufficiency.—Typical tetany undoubtedly is recognized as a rule, but I believe that many patients with parathyroid insufficiency, which have a blood calcium above the level which would produce tetany, escape the physician's notice. Laryngeal tightness, tingling of the hands and feet, spasm of the ocular muscles with difficulty of accommodation, frequently are interpreted as postoperative irritability in a highly nervous patient when really they are caused by temporary parathyroid insufficiency.

My attention was called first to this condition some twelve years ago when roentgen treatment for thyrotoxicosis first became popular. Many patients submitted themselves to courses of treatment and, not being relieved promptly, came to operation. The usual amount of thyroid was removed and an unusual number became hypothyroid. In treating this group of patients with thyroid extract, I found that many of them felt much better if calcium was administered with it and would request that it be given if it were discontinued. I believe these were cases of parathyroid insufficiency with a blood calcium above the level producing tetany. Whether this condition was caused solely by the operation or in part at least by the roentgen treatment cannot be determined.

Rarefaction of bones, as pointed out by Ruggles, is frequently found in association with thyrotoxicosis. Apparently, in these patients fixed calcium is being withdrawn in an attempt to make up a blood calcium deficiency.

Treatment consists of the administration of calcium in any form, such as large quantities of calcium-containing food, calcium lactate or calcium chlorid. If this is not effective, parathyroid extract may be given. The use of glucose, subcutaneously or intravenously, or in the form of sugar by mouth, decreases the phosphate content of the blood and may be used as a substitute for parathyroid extract which is expensive and requires frequent administration.

SUMMARY

A review of the literature seems to warrant the following summary of our present knowledge of the treatment of thyroid disease:

1. Iodin may play a twofold part in thyroid disease: first, in iodine metabolism, and second, in modification of the course of invading infections.
2. Lack of iodine well may be the cause of endemic goiter and iodine deficiency, coupled with infectious processes or with the toxins from infections, the cause of hyperplasia.
3. The use of very small doses of iodine periodically, in the amounts contained in iodized salt, has not been productive of a sufficient number of thyrotoxic flare-ups in existing goiters to contraindicate its general use.
4. Ingestion of a sufficient amount of iodine will prevent endemic goiter, may modify its course when it is established, and may modify the course of hyperplastic goiter, but will not effect a cure in either type.
5. Iodin may be used safely as a preparation for operation in both adenomatous and hyperplastic goiters; it temporarily modifies the clinical symptoms in approximately 50 per cent of adenomas and 90 per cent of hyperplasias. Those hyperplasias least affected by it frequently show the greatest degree of thyroiditis.
6. The arrest of thyrotoxicosis depends upon the removal of a sufficient amount of gland to restore the thyroid balance. Failures usually are caused by insufficient removal.

7. The use of iodine postoperatively tends to prevent a recurrence of hyperplasia, but will not restore the thyroid balance when too little gland has been removed.

8. Parathyroid insufficiency may be present in spite of the fact that the blood calcium has not been reduced sufficiently to produce tetany. It should be recognized and treated early.

9. Good cosmetic results are essential in order to secure the confidence and cooperation of that large group of individuals having thyroid disease.

10. Radiation is contraindicated in adenomatous goiter. Frequently it is effective in low-grade hyperplasia.

11. Carcinoma of the thyroid occurs in from one to two per cent of all thyroid patients treated surgically. Radical operation, followed by radium or roentgen therapy, offers the best chance of cure.

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REFERENCES

1. Shivers: Etiology of Goiter, Tr. Am. Assoc. Study of Goiter, pp. 23-34, 1930.
2. Crotti: Personal communication.
3. Collier and Potter: Reaction to Iodine of Goiter From a Goiter Area, Tr. Am. Assoc. Study of Goiter, pp. 11-17, 1930.
4. Graham, Allen: Nodular Goiter, Tr. Am. Assoc. Study of Goiter, pp. 51-61, 1930.
5. Marine, D., and Williams: The Relation of Iodine to Structure of Thyroid Gland, Arch. Int. Med., 1:349-384, 1908.
6. Plummer, H. S., and Boothby, W. N.: The Value of Iodine in Exophthalmic Goiter, J. Iowa Med. Soc., 14:66-73, 1924.
7. Millner, Raymond: Variation in the Normal Position of the Parathyroids, Tr. Am. Assoc. Study of Goiter, pp. 57-59, 1931.
8. Ward and Carr: Malignant Goiter, Tr. Am. Assoc. Study of Goiter, pp. 122-125, 1930.
9. Ruggles, Howard: Personal communication.
10. Austin and Wagner: Exophthalmic Goiter, Tr. Am. Assoc. Study of Goiter, pp. 43-44, 1930.
11. Thompson, Willard: Course of Exophthalmic Goiter Following Subtotal Thyroidectomy, Tr. Am. Assoc. Study of Goiter, pp. 17-21, 1931.
12. Else: Prevention of Postoperative Recurrence in Thyroidectomy, Tr. Am. Assoc. Study of Goiter, pp. 22-25, 1931.

DISCUSSION

W. I. TERRY, M.D. (384 Post Street, San Francisco).—One cannot bring up a discussion of advances in the treatment of goiter without mentioning in the same breath a certain retrogression which has become more common in the years since Plummer emphasized the use of compound iodine solution. It becomes more evident as the years go on that the recognition of hyperthyroidism becomes an indication for iodine therapy in far too many cases. As Doctor Hoag has pointed out, an improvement may be expected in 54 per cent of the adenomatous group and 88 per cent of the cases of Grave's disease, and this in itself is a temptation to the internist to continue such therapy over a prolonged period. However, it is one thing to note an improvement following certain lines of therapy and another to get a cure. There is no evidence at hand to encourage one to look for a cure of adenomatous goiter by iodine therapy, and few cases of cure have been reported in Grave's disease. This is in spite of many attempts, upon large and well-observed series of cases. On the other hand, no surgeon familiar with goiter work can fail to note that the most difficult and dangerously ill patients with

which he has to deal are those treated for months with iodine, and who have thereby become iodine resistant. Thus the surgeon's most potent preoperative weapon has been rendered of no avail. Much emphasis should be placed upon the increased danger to the patient by this form of therapeutic mismanagement.

Regarding the differences in technique used in operations upon adenomatous goiter and hyperplasia, Doctor Hoag has done well to point out that in the former every attempt should be made to preserve as much uninvolved thyroid tissue as possible, while in the hyperplastic goiter only as much should be left as, in the surgeon's judgment, will supply adequate thyroid secretion after an initial period of mild post-operative hypothyroidism. The common error in adenoma is to leave too little thyroid and in hyperplasia too much. Those goiters which are hyperplastic and contain true adenomas should be handled like hyperplasias, taking care to remove all the adenomas which may be present. In this connection, I am confident that adenomatous tissue cannot substitute for normal thyroid gland. This in itself makes adenoma primarily a surgical condition in that either iodine or x-ray therapy has its maximum effect upon the thyroid gland rather than upon the adenomatous tissue. A further indication for early surgery upon this type of goiter is to be seen in the findings of Ward and Carr that 85 per cent of malignancies originate in adenomata and that 94 per cent have a history of pre-existing goiter.

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CLARENCE G. TOLAND, M.D. (1930 Wilshire Boulevard, Los Angeles).—The maze of interwoven factors bearing upon the etiology of thyroid disease has kept the medical profession in a continuous quandary for decades.

The relative importance of iodine intake, of infection, of constitutional predisposition, with later psychic trauma, has never been adequately determined.

Iodine metabolism has been the focus of most thought, and we are certain of its causative rôle in certain thyroid disturbances, such as endemic goiter. Its ameliorative effect in Grave's syndrome has been a godsend to the surgeon, who previously had to face a discouraging mortality and impose upon his patients a prolonged staged operative procedure. Save in the young adolescent patient, however, it rarely cures, and we are still groping for the cause.

I am becoming more and more of the opinion that infection is playing a rôle in the cause of Grave's disease, how important only later discoveries can tell.

Certainly the eradication of foci of infection, such as diseased tonsils or dental cavities, produces a marked favorable effect upon the disease.

When taking the history of these thyroid patients, we not infrequently find that the thyroid enlargement has been preceded by an acute respiratory infection.

During mild influenzal epidemics in the winter, we seem to see an increase in the number of patients with Grave's disease. It is entirely possible the thyroiditis produced may excite hyperplastic changes.

Another point I wish to bring out is the treatment of carcinoma of the thyroid. Doctor Hoag has pointed out the relative hopelessness of its surgical treatment. The point that needs emphasis and acceptance is that the treatment is preventive. Over 90 per cent of carcinomatous thyroids occur in fetal adenomata. Removal of all adenomas obviously would prevent practically all cancers of the thyroid.

A short time ago we operated upon a patient with a hard sclerotic adenoma who ten years ago had chosen x-ray treatment rather than surgery. It proved to be cancerous.

Several weeks ago we found cancerous tissue in an adenoma of a girl nineteen years of age.

Even though the percentage of occurrence of cancer in an adenoma is only one-half of one per cent, I do not believe we are justified in asking our patients to accept even that chance. The same surgical principle applying to removal of precancerous tissue elsewhere

should apply here. Regardless of pressure symptoms, I believe all adenomas, with rare exceptions, should be removed. We know the majority of them eventually cause trouble, due to cardiovascular damage and toxic changes.

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RALPH T. RICHARDS, M. D. (115 East South Temple Street, Salt Lake City, Utah).—Doctor Hoag has been most successful in summarizing in a short space the main points of his subject. My agreement with his conclusion leaves me very little to discuss.

There is, however, one point which I think may be further emphasized, namely, the harmlessness of the domestic and restaurant use of iodized salt. Information obtained from the leading salt companies in the United States shows the average consumption per person is approximately three and one-half pounds per year. The strength of potassium iodid in the iodized salt is 1 to 5000. The average individual dose of persons using iodized salt exclusively would not be more than one grain of potassium iodid a month. Needless to say, this amount is harmless, and in such small doses would not have a harmful effect on any type of goiter. The numerous articles to the contrary appearing in the literature the last few years are not convincing.

In considering technique, Doctor Hoag recommends "drainage only in exceptional cases." I am aware of the increasing use of the nondrainage method, but have seen too many complications from retained secretions, and one case of mediastinal abscess, so that I personally lean toward drainage in case there is much freshly cut glandular surface exposed at the end of the operation. When cuneiform excision is possible, or cut surface can be closed over by sutures, nondrainage can be almost routinely employed. In case drainage is used, I can see no contraindication to using the midline, provided the depressor muscles are brought together below the drain in the suprasternal space. This gives direct outlet for the discharges, does not thicken the suture line, and prevents the unsightly suprasternal depression which may be present in case the muscles are not brought together beneath the drain. While the drain may be removed in twenty-four hours, the condition of the patient must be the determining factor.

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A. B. COOKE, M. D. (727 West Seventh Street, Los Angeles).—It is extremely difficult to prepare a paper on any subject which is at once brief, comprehensive, and practical. Doctor Hoag has succeeded admirably. He gives us little that is new or startling, but everything he says is well worth careful consideration.

Personally, I still believe that there is a real difference between the hyperthyroidism of toxic adenoma and that of exophthalmic goiter—a difference in kind as well as in degree. Anyone who will eliminate the dicta of the laboratory while he ponders the problem will find this conclusion forced upon him. I imply no criticism of the laboratory, but I maintain that the findings of the microscope must not be allowed to supersede and nullify obvious clinical evidence. The vagotonic imbalance which characterizes exophthalmic goiter is probably the chief factor operating to produce a distinct clinical picture.

In his fourth point under Operative Technique, Doctor Hoag maintains the advisability of providing drainage only in the exceptional case. I am very sure that this suggestion is unsound. Even the most expert operator will find himself compelled to open the wound at a later date in fully 90 per cent of the cases. Drainage for one day adds nothing unfavorable to the progress of convalescence or to the ultimate appearance of the wound.

The one special plea I would make in connection with the surgery of toxic adenoma is that it be sufficiently radical to accomplish permanent results. Though one lobe only may seem to be implicated, it is important to bear in mind always that small, and for the time being, inactive foci are apt to be disseminated throughout the gland. Timidity or negligence

on the part of the operator can only mean in many cases partial and temporary relief, with necessity for a second operation at a later date.

Probably the most important point to be observed in the surgical management of exophthalmic goiter is that operation is positively contraindicated so long as the toxicity is on the increase. This applies to ligation as well as to thyroidectomy. In these dangerous cases it is far better to wait for an interval of remission. Fewer patients will die while waiting than will succumb under any type of surgical attack.

In doubtful cases or where satisfactory response to preparatory treatment cannot be obtained, the advantage of multiple stage operation should be invoked. The average patient will withstand a few minutes of surgical trauma, whereas attempt to complete the work at one sitting is very likely to multiply the dangers many fold.

The surgery of the thyroid gland has become safe surgery. In expert hands the mortality is maintained in the vicinity of one per cent. That it is occasionally followed by recurrence, or that the toxic symptoms now and then persist after operation, cannot be denied. Such untoward results cannot be fairly charged to surgery. Rather are they to be regarded as reproaches to the individual operators. The surgeon who does the most complete thyroidectomy is practically always the surgeon who has had the widest experience. In his hands unfortunate after-results of the kind referred to are seldom encountered.

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DOCTOR HOAG (Closing).—I wish to thank all those who have so kindly discussed my paper and have added so much of value to it, especially Doctor Richards for his remarks on the use of iodized salt. I feel that we have been too conservative in recommending this simple and harmless means of preventing endemic goiter.

As I have indicated in this paper, I quite agree with Doctor Toland's view that focal infections play a very important part in hyperplastic goiter, and if they are not the real causative agent they are at least frequently responsible for the exacerbations.

Doctor Terry's statement that "the common error in adenoma is to leave too little thyroid and in hyperplasia too much" should become an axiom to the thyroid surgeon.

Doctor Cooke is sure that the closure of goiter wounds without drainage is unsound. To me there is no more reason for drainage here than after a clean appendectomy. Closure without drainage does, however, require a more careful handling of tissues, a complete hemostasis, with a minimum amount of small-sized catgut, and adequate asepsis. My associates and I have drained less than two per cent of all primary thyroidectomy patients over a period of the last twenty years, the operations having been done under nitrous oxid-oxygen and usually without local infiltration. Contrary to Doctor Cooke's contention that 90 per cent will have to be opened later, 75 to 80 per cent have healed by primary intention, the remaining 20 to 25 per cent having been aspirated through the line of incision one or more times. There have been no occurrences of mediastinal abscess or other serious complications. I cannot agree that drainage does not interfere with the cosmetic result and prolong the convalescence. Moreover, one-day drainage does not prevent the formation of serum later unless the drainage tract is frequently reopened or kept open. Serum sufficient for aspiration, if it occurs, usually first becomes manifest on the seventh to the tenth day and for the most part is the result of clogged lymph channels from absorbing catgut. This is supported by the fact that, with a silk technique, as high as 95 per cent of primary healing can be obtained, although the penalty for using non-absorbable material may be too great in the other five per cent to allow of its routine use. Drainage too frequently is followed by scar formation, adherent and painful scars, localized keloids, and a prolonged period of convalescence. Why use it?

CORONARY OCCLUSION—SOME ABNORMAL RHYTHMS*

REVIEW OF LITERATURE

REPORT OF CASES

By WILLIAM H. LEAKE, M.D.
Los Angeles

DISCUSSION by Donald J. Frick, M.D., Los Angeles;
William Dock, M.D., San Francisco; F. R. Mason, M.D.,
Los Angeles.

LEWIS¹ has shown that ligation of a coronary artery in animals may provoke disturbances in rhythm. In man extrasystoles are common, and paroxysmal tachycardia, especially of the ventricular type, auricular flutter, auricular fibrillation, and heart block have all been observed. Robinson and Hermann² have commented on the frequency of ventricular tachycardia following coronary occlusion. Wearn³ reported a study of nineteen cases of coronary infarction which came to autopsy. There were ten electrocardiograms in this series. It was noted that disturbances in the T wave and a decrease in the amplitude of QRS were the most constant findings. In all the ten records there was an alteration of T in at least one lead, particularly in 1 and 2. There were no abnormal rhythms reported.

Fred M. Smith⁴ reported eleven patients with coronary occlusion, in one of whom the descending branch of the left coronary artery was ligated in repairing a stab wound of the heart; the remaining ten patients had typical clinical manifestations of coronary artery occlusion. There were two autopsies in this series. The most constant findings were change in T deflection and a decrease in amplitude of QRS. No abnormal rhythms were described.

K. Shirley Smith⁵ reports one case of complete heart block following coronary thrombosis. The patient recovered. Levine and Brown⁶ found only two instances of complete heart block in a series of 145 cases and Parkinson and Bedford⁷ only one in a series of 100 cases of cardiac infarction; abnormal rhythms other than extrasystoles occurred in fourteen. These authors are of the opinion that in the majority of cases the rhythm remains normal apart from extrasystoles, and the rate is usually but not always increased.

Louis H. Sigler⁸ reported a series of twenty cases of acute coronary occlusion. These patients were apparently studied only from the clinical and electrocardiographic standpoint as no autopsies were reported. Except in one patient whose electrocardiogram showed auricular fibrillation no abnormal rhythms were demonstrated. There were two records which showed partial heart block. Many of the electrocardiograms in this series were taken several weeks or months after the attack, therefore no conclusions can be reached concerning disturbances in rhythm or conduction.

* From the Medical Service of the Los Angeles County General Hospital.

* Read before the General Medicine Section of the California Medical Association at the sixtieth annual session at San Francisco, April 27-30, 1931.

FINDINGS IN EXPERIMENTAL STUDY OF CORONARY INTERFERENCE

In a recent study of angina pectoris F. C. Wood and C. C. Wolferth⁹ demonstrated temporary ventricular complex changes in fifteen patients during attacks of angina pectoris. The remaining fifteen showed no "specific" electrocardiographic changes during the attacks. In a series on dogs and cats, temporary interference with a part of the coronary circulation produced temporary and rapidly reversible changes in the electrocardiogram somewhat analogous to those seen during attacks of angina pectoris. More striking changes followed the clamping of the vessels on the posterior surface of the heart (the circumflex branch of the left and the posterior descending branch). Usually little or no change was produced by obstruction of the right coronary or of the anterior descending branch of the left coronary artery. There were more marked changes which followed the simultaneous obstruction of both main branches of the left coronary artery than followed the obstruction of either one separately. In their experiments it was also noted that rapidly reversible alterations in the ventricular complexes were more readily obtained after myocardial damage, incident to previous manipulation, had produced a certain amount of permanent electrocardiographic change. This would indicate that coronary occlusion in a healthy fresh heart does not produce electrocardiographic changes as readily as it does in a damaged one. Wood and Wolferth noted further that temporary coronary occlusion in their animals frequently produced no electrocardiographic change. Cardiac arrhythmia, which could be attributed to the circulatory disturbance in itself, was not a frequent early phenomenon. When it did occur, it seemed to be attributable to the mechanical stimulation of the heart muscle by the mechanism producing the occlusion.

STUDY OF THE REPORT OF EIGHTEEN CASES OF CORONARY OCCLUSION

This paper is based on a study of eighteen cases of coronary occlusion in which necropsy revealed obstruction by a thrombus or an embolus (one case) in some portion of the coronary circulation. Electrocardiograms were obtained in each case following the occlusion; the shortest period elapsing was four hours, the longest twenty-one days. In eight cases the first electrocardiogram was taken within thirty-six hours, in six within one week, and in four the records were not obtained until more than seven days had elapsed following the occlusion. More than one electrocardiogram was obtained in several cases.

Age Incidence and Etiology.—The youngest patient in this series was forty-three and the oldest seventy-seven, the average age being fifty-nine. The proportion of males was considerably higher than is usually given, as there were sixteen males and only two females. As far as could be determined from the histories—some of which through force of circumstances were very sketchy—occupation, habits and previous illnesses

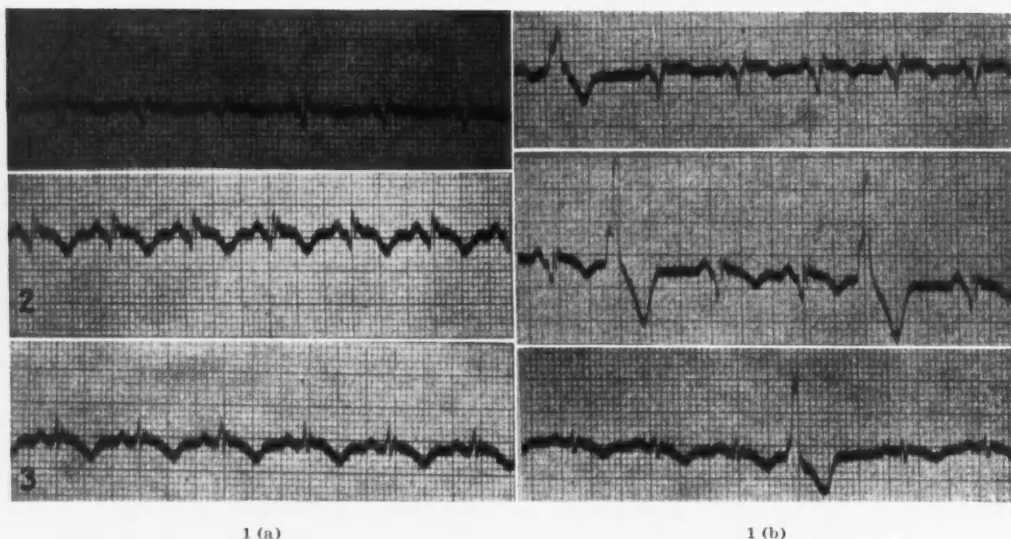


Fig. 1 (a) is an electrocardiogram taken March 31, 1927, showing low voltage in all leads and a high take-off of R-T in leads 2 and 3. This record was considered typical of coronary occlusion. Figs. 1 (b), 1 (c), and 1 (d) are electrocardiograms taken during the subsequent five months.

could not be held responsible for the coronary artery disease. The Wassermann test was positive in one case and a two plus Kahn reaction was present in one. In no instance was evidence of luetic heart disease found at necropsy. Arteriosclerotic changes were found at necropsy in all the cases of this series and peripheral arteriosclerosis was evident in practically all the patients.

Associated Arrhythmias.—The striking feature in this relatively small series is the number of electrocardiograms showing arrhythmias other than premature contractions, the latter being the type most frequently reported in the literature. Of the eighteen cases five showed auricular fibrillation, although it was difficult to determine in two of these the duration of the irregularity. One of these, Case 14, showed short periods of ventricular tachycardia following symptoms of coronary occlusion which occurred while the patient was in the hospital. In Case 3 persistent

ventricular tachycardia superseded the auricular fibrillation which occurred following the thrombosis and was apparently the immediate cause of the patient's death. Although ventricular tachycardia occurred four times in this series, in only two of the patients did it follow immediately the attack, and in one of these (Case 13) it was controlled by quinidin, the patient dying suddenly several days later while the rhythm was regular. Complete heart block was encountered twice, and in each case it apparently occurred as a direct result of the coronary accident. The remaining nine cases showed regular rhythm with the exception of occasional ventricular premature contractions in three of these. Bundle branch block involving the right bundle occurred once.

Electrocardiograms.—The electrocardiograms in six patients of this series failed to show changes in the R-T interval which are considered typical of coronary occlusion. The so-called

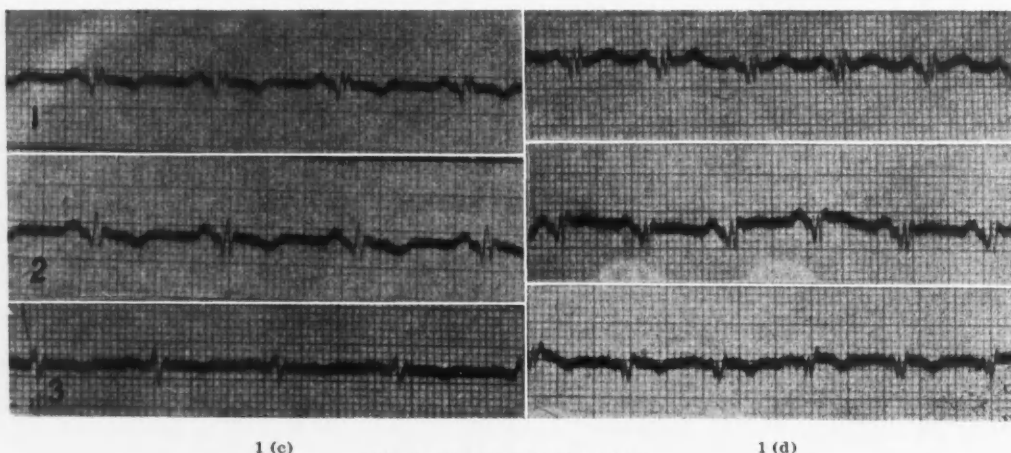


Fig. 2.—See legend under Fig. 1.

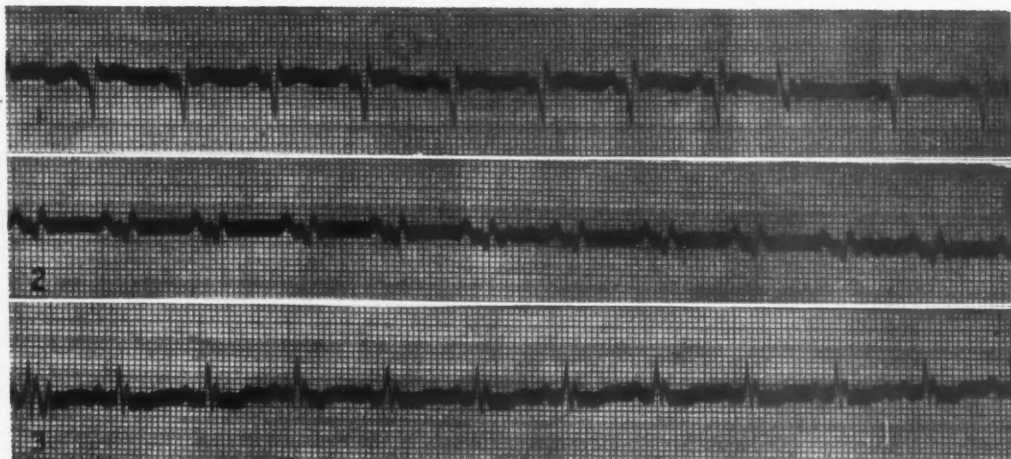


Fig. 3.—Electrocardiogram taken March 5, 1931, showing right axis deviation, ventricular premature contraction low voltage and slight upward convexity of the R-T interval in lead I.

"coronary T" occurred in lead 1 alone, four times; and in leads 1 and 2, twice; in leads 2 and 3, three times; lead 3, two times; and once in all three leads. The patients in whom no suggestive changes in the R-T interval were detected were as follows: three with regular rhythm, two with auricular fibrillation, and one with complete heart block.

Coronary Involvement.—The infrequency with which occlusion of the right coronary artery is encountered at necropsy is demonstrated in this study. Only two patients showed complete occlusion of the right, although in two there were marked sclerosis and narrowing in addition to thrombosis of a branch of the left coronary artery. In one of these patients the electrocardiogram showed auricular fibrillation with typical R-T changes later followed by ventricular tachycardia, while the other showed complete heart block with no R-T interval changes. In fifteen cases the left coronary was involved and in one the pathologist failed to state the location of the thrombus. No attempt was made to localize the lesion by means of the electrocardiogram, but the impression remains after analyzing these case histories that this would not have been possible.

REPORT OF CASES

Lack of space prevents a detailed report of all the cases in this series. Two cases, No. 5 and No. 13, have been selected for description.

CASE 5.—A man, fifty-four years old, was admitted March 31, 1927, complaining of pain beneath the sternum and in the back and shoulders. The onset occurred five days previously with sharp, lancinating pain in the precordial area and under the left scapula. These symptoms were accompanied by shortness of breath and cyanosis. Except for frequent colds and sore throats, and an attack of rheumatism ten years previously, the patient denied all other illnesses including venereal disease. He stated that he used neither tobacco, alcohol, nor drugs. On admission the patient was dyspneic and cyanotic. The heart rate was rapid and the rhythm was of the "gallop" type. The heart sounds were of poor quality, but no murmurs or friction rubs were heard. There was an occasional premature contraction. The blood pressure

was 106 systolic and 80 diastolic. An electrocardiogram taken shortly after admission showed low voltage in all leads, and a high take-off of the R-T interval in leads 2 and 3. The record was considered typical of coronary occlusion. Four subsequent electrocardiograms during the next five months showed a persistence of the low voltage, but the high take-off of the R-T interval became less noticeable (Figs. 1 and 2).

The patient's course in the hospital was very stormy during the first three months. He suffered frequent attacks of severe precordial pain with radiation to the left arm, and at times severe nausea was present. The blood pressure gradually rose from 106 systolic and 80 diastolic to 165 systolic and 100 diastolic. Five months after admission the patient developed symptoms which were attributed to either bronchopneumonia or infarction in the right lung. The leukocyte count rose to 31,000 with 88 per cent polymorphonuclears. The temperature remained elevated for a week, following which definite improvement was noted. A small amount of sterile hemorrhagic fluid was removed from the right thorax during this acute illness. The patient was discharged September 28, 1927. Treatment consisted of rest, nitrites, theocalcin, and sedatives.

Following the patient's discharge nothing further was heard from him until December 1929, when he was sent to the out-patient department by another clinic for an orthodiagram. This showed a slight decrease in the size of the heart. He was again lost sight of until March 5, 1931, when he was admitted to the medical service with a diagnosis of cardiac decompensation. He had been taking small quantities of digitalis over a long period of time, but one month prior to this admission he had developed increased

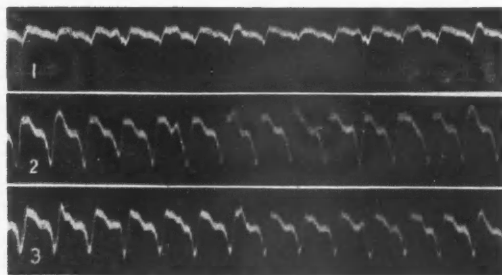


Fig. 4.—Electrocardiogram of J. K., showing ventricular tachycardia with a rate of 150.

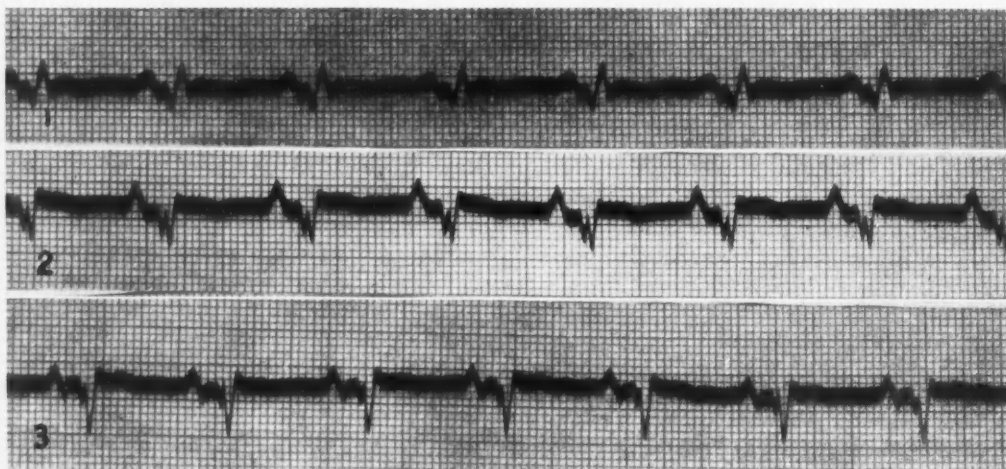


Fig. 5.—Electrocardiogram of J. K. after two grams of quinidin sulphate by mouth had been administered (0.3 gram every three hours), showing normal rhythm.

dyspnea and weakness, and edema had appeared in the lower extremities. The patient stated that he had been able to do light work since his discharge from the hospital in 1927, but he had experienced frequent attacks of weakness, palpitation, and dyspnea. There had been little or no pain. Examination revealed the general picture of congestive heart failure. There was marked arteriosclerosis. The blood pressure was 120 systolic and 80 diastolic. The heart rate was 90 and the rhythm was regular. An electrocardiogram taken five days after admission showed right axis deviation, ventricular premature contractions, low voltage, and a slight upward convexity of the R-T interval in lead 1 (Fig. 3). The patient was given digitalis and the fluid intake was restricted. He died suddenly twelve days after admission while sitting up in bed.

At necropsy the heart weighed 500 grams. All chambers were markedly dilated and there was slight hypertrophy of the ventricles. On the anterior surface of the endocardium of the left ventricle there was an area 3x4 centimeters covered with material resembling a thrombus. On section the greater part of the wall of the left ventricle, especially that portion overlying the thrombotic area, was very fibrous and contained numerous petechiae. The anterior descending branch of the left coronary artery showed many calcareous plaques with marked narrowing of the lumen and obliteration of the artery about one centimeter from its origin. Similar changes were observed in the circumflex branch of the left coronary with almost complete obliteration of the lumen near its termination.

Electrocardiograms taken following the acute onset in 1927 were considered characteristic of coronary occlusion, but the record obtained during the patient's last illness showed only low voltage, occasional ventricular premature contractions and a slight upward convexity of the R-T interval in lead 1. In the earlier electrocardiograms the characteristic R-T changes were found in leads 2 and 3. Necropsy disclosed no evidence of recent thrombosis, but the findings revealed obliteration of the lumen of the anterior descending branch of the left coronary artery and a fibrosis of the wall of the left ventricle.

CASE 13.—A man, fifty-one years of age, was admitted to the hospital complaining of marked weakness, dyspnea, palpitation, nausea, and vomiting. The symptoms had first occurred eight days previously, but had been much worse for two days prior to admission. There had been no previous similar attacks. There had been considerable precordial pain. On admission the blood pressure was 98 systolic and 80

diastolic. The heart rate was extremely rapid, the rhythm was regular and the sounds were practically inaudible. An electrocardiogram obtained shortly after admission showed ventricular tachycardia with a rate of 150 (Fig. 4). The patient was given quinidin sulphate by mouth, 0.3 gram every three hours, and after 2 grams had been administered the rhythm was normal (Fig. 5). The patient appeared to be improving, but he died suddenly while sitting up in bed six days after admission.

At necropsy the heart weighed 500 grams. There was marked coronary sclerosis with complete occlusion by a thrombus of the interventricular branch of the left coronary artery. There was fibrosis of the myocardium at the apex.

The electrocardiogram taken eight days after the onset showed ventricular tachycardia. Sinus rhythm was restored by the oral administration of quinidin.

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REFERENCES

1. Lewis, Thomas: Paroxysmal Tachycardia, *Heart*, 1:43, 1909.
2. Robinson, G. C., and Hermann, G. R.: Paroxysmal Tachycardia of Ventricular Origin and Its Relation to Coronary Occlusion, *Heart*, 8:59, 1921.
3. Wearn, J. T.: Thrombosis of Coronary Arteries, *Am. J. Med. Sc.*, 165:25, 1923.
4. Smith, Fred M.: Electrocardiographic Changes Following Occlusion of Left Coronary Artery, *Arch. Int. Med.*, 32:497, 1923.
5. Smith, K. Shirley: Coronary Thrombosis and Complete Heart Block with Note on Febrile Reaction in Cardiac Infarction, *Lancet*, 1:685 (March 29), 1930.
6. Levine, Samuel A., with the collaboration of Charles L. Brown: Coronary Thrombosis—Its Various Clinical Features, *Medicine*, 8:245 (September), 1929.
7. Parkinson, J., and Bedford, D. E.: Cardiac Infarction and Coronary Thrombosis, *Lancet*, 1:4, 1928.
8. Sigler, L. H.: Acute Coronary Occlusion, Clinical and Electrocardiographic Study of Twenty Cases, *Ann. Int. Med.*, 4:969 (February), 1931.
9. Wood, F. C., and Wolferth, C. C.: Angina Pectoris—Clinical and Electrocardiographic Phenomena of Attack and Their Comparison with Effects of Experimental Temporary Occlusion, *Arch. Int. Med.*, 47:339 (March), 1931.

DISCUSSION

DONALD J. FRICK, M. D. (1136 West Sixth Street, Los Angeles).—The cases reported have been well

analyzed and, fortunately, leave no question in our mind as to the diagnosis as they were followed to the autopsy table. All showed marked sclerosis with probable cardiac fibrosis, so that it is not surprising that there was such a large number evidencing abnormal rhythm during some stage of their illness. Auricular fibrillation has not been an unusual finding in our cases of coronary occlusion in the aged, and occurred in one young man (whose usual health was robust) who developed a coronary occlusion following an operation for a gangrenous appendix. Heart block, bundle branch block, may not be a sequel of coronary occlusion but may have existed for some time prior to the occlusion. The same mechanism that causes coronary occlusion oftentimes produces fibrotic changes in the conducting system with consequent block. We have wondered at times whether the change in the circulation of the heart was the cause of abnormal rhythm, as we have seen several patients develop auricular fibrillation of a paroxysmal type following sudden shock or injury: one patient after being badly frightened, one following a fractured clavicle, and two after fracture of the hip. All these patients had exhibited myocardial damage of an appreciable degree with hypertension and arteriosclerosis but no evidence of coronary occlusion at the time of the onset of their abnormal rhythm.

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WILLIAM DOCK, M. D. (Stanford University Medical School, San Francisco).—Doctor Leake's carefully studied series of patients who died following coronary occlusion emphasizes the serious import of paroxysmal tachycardia in this condition, for the incidence is always, as in his series, greater in those who are going to die of the disease than in those who survive an attack of this sort. On an experimental basis, both digitalis and quinidin have been shown capable of preventing such attacks of tachycardia, but it is the usual practice to use quinidin. It is now quite clear that patients who have had extreme shock and severe myocardial damage due to coronary thrombosis tolerate quinidin even in very large doses, and I know of no cases in which its use has done harm. The need for it usually arises between the third and fourteenth days after the onset of symptoms. Heart block, either transient or permanent, is likely to manifest itself earlier, but is a less serious complication and requires treatment only when associated with Stokes-Adams seizures.

I believe that the safest administration of quinidin is to begin the drug in doses of 0.3 to 0.5 gram every four to six hours as soon as paroxysmal tachycardia occurs or when ventricular extrasystoles become more frequent than six to eight per minute, and to continue the drug for at least two weeks, regardless of whether the arrhythmia is abolished quickly or not. I should be interested in knowing if Case 13 was still on quinidin at the time of his death. Quinidin, unlike digitalis, has a rather transient effect, and must be given every six hours to keep the heart under its influence. While we cannot expect it to prevent sudden death in this group of cases, it undoubtedly reduces the risk of ventricular fibrillation in the patients with ventricular arrhythmias.

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V. R. MASON, M. D. (838 Pacific Mutual Building, Los Angeles).—This timely paper by Doctor Leake calls attention to sudden disturbances of rhythm in patients and to their importance as evidence of disease of the coronary arteries.

It is the demonstration of these minor disturbances as well as the more spectacular phenomena which has led to more early and accurate diagnosis of cardiac disease incident to coronary artery narrowing.

With early and accurate diagnosis it is apparent that the institution of proper treatment will lead to considerable prolongation of life in many instances.

THE PATCH TEST—ITS USE IN DERMATOLOGY*

REPORT OF CASES

By JOHN M. GRAVES, M. D.
San Francisco

DISCUSSION by Fred Firestone, M. D., San Francisco;
Norman N. Epstein, M. D., San Francisco; Samuel Ayres,
Jr., M. D., Los Angeles.

THE patch test was suggested in Europe by Bloch and Jadossion. Interest has been stimulated in this country particularly by Sulzberger, Wise, Spain, and others.

This test is of assistance in determining the etiology of many cases of dermatitis venenata. Of recent years many attempts have been made to clarify the subject of dermatitis and eczema. Investigation has succeeded in amputating various groups from the old classification. A better understanding of the part played by fungi in the production of dermatoses has removed a large number of conditions from the old eczema group and has established them as distinct entities. With the patch test we are now in the process of segregating another group.

The test itself will probably have a wide use. It is simple to apply, does not require much time, and the results are frequently easily apparent.

TECHNIQUE

The test is performed as follows: The gummed surface of a strip of adhesive tape is partly covered with a piece of oiled silk about one inch square. Gauze or linen, two or three layers thick, is cut about one-half inch square. This gauze is moistened with the suspected material. The gauze square is placed in contact with the skin and covered by the oiled silk and adhesive tape. Spain has used ordinary blotting paper instead of gauze and found it satisfactory. If the tests are few they may be applied to the arm. Frequently, however, there are many suspects so that it is necessary to apply the tests to the back. Ordinarily the patches are left in contact with the skin twenty-four hours. If, however, a severe reaction results, the patch should be removed. Spain, in his work of poison ivy, found that contact for two to four hours was sufficient.

It is now a well-established opinion that many cases of dermatitis or eczema of an erythematous, papular and vesicular type are truly allergic phenomena. Much of the experimental work has been done with plants such as primrose. Bloch, for instance, has succeeded in sensitizing himself to primrose. There are so many individuals who are sensitive to plants that experiments can be repeated sufficiently often to be convincing.

It is well known that in certain cases of urticaria, the patient can be shown to be sensitive to various substances. This has been demonstrated by scratch and intradermal tests. In eczema, how-

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* Read before the Dermatology and Syphilology Section of the California Medical Association at the sixtieth annual session, San Francisco, April 27-30, 1931.

ever, the allergic phenomena often differs. Thus a patient's skin may react to simple prolonged contact, but not to the scratch test. Were the scratch test only done on such a patient, he would remain in the group of eczemas of unknown cause. It can now be definitely said that, in investigating the cause of eczema, the patch test is one of the essential methods, and in such cases is superior to other functional skin tests.

CLINICAL APPRAISAL

It is easy for this test to become cumbersome. One must not forget that he is practicing clinical medicine rather than mechanistic medicine. If every case of eczema were subjected to testing with all possible contacts the results would be confusing and discouraging. In the average case a careful history and close study of the lesions will point to probable substances involved. By a proper clinical appraisal, the number of tests to be done is lessened and the entire procedure simplified. This is well illustrated by a case report recently published by Sulzberger and Weinberg. The patient, suffering with an extensive dermatitis sufficiently severe to markedly affect the general health, had been treated for months by diet, glandular substances, colonic irrigations, blood injections, Alpine light, et cetera. A careful history indicated an external irritant as the probable cause. Questioning reduced the probabilities to eight. One of these, an insect powder, was definitely shown, by means of the patch test, to be the etiologic factor. Removal of the powder from the patient's environment was followed by a permanent disappearance of the eruption.

The phenomena of eczema are explained as allergic reactions. Certain cells have become allergic due to previous contact with a specific substance. This is not necessarily protein in nature. As a result of this contact, fixed cell antibodies are supposed to develop. Another contact with the specific substance then results in a reaction. This development of actual sensitization has been accomplished many times in man and animals.

Of particular value are the experiments of Bloch in which he sensitized himself and others to primrose. These experiments explain the phenomena of acute dermatitis venenata. The problem of chronic eczema presents many difficulties. Perhaps, in order to provoke a dermatitis, prolonged contact with the antigen is necessary, especially if the antigen be dilute. Some evidence in favor of this possibility may be adduced from the fact that Bloch could sensitize a man to primrose much more rapidly by using a very concentrated extract.

There are certain times when the reactivity of the skin is exaggerated. At such times one may obtain numerous positive reactions from substances that have no relation to the dermatitis. These cases must be retested. The increased reactivity of the skin may be lessened by a brief period of rest in bed and by the promotion of elimination.

On the other hand, there are refractory phases during which time a patient will not react to substances to which he is actually extremely sensitive.

Therefore suggestive reactions should always be repeated. Negative tests should also be repeated when a carefully taken history is indicative.

Attempts have been made to determine the degree of sensitization of the individual patient. The tests are made with the known allergen in different dilutions. This has been of particular value in poison oak and poison ivy dermatitis. The allergen is applied in different dilutions, as described above. The weakest dilution giving a reaction serves as an indication of the dose to be used in attempts at desensitization. The next weaker dilution is the first one used. In this manner the danger of severe reactions is minimized.

The older idea of an internal or metabolic cause for eczema is being attacked. Numerous attempts to explain the condition by means of blood chemistry determinations, endocrine studies, et cetera, have so far given few definite findings. Recently attention has been directed toward the calcium and potassium ratio in the blood, but nothing of a positive nature has been shown.

There certainly is some change in certain cells that allows them to react in a characteristic manner; what it is no one as yet knows. It is known, however, that there is a specific reaction with a specific antigen. Practically it is often possible to identify the antigen. Its elimination from the patient's environment is then followed by a disappearance of the lesions. This conception applies to all allergic diseases.

The patch test applies especially well to patients with acute and subacute dermatitis venenata. In the study of chronic eczema it has been unsatisfactory. This is perhaps explained by Bloch's experiments. Prolonged contact is often necessary for sensitization. Perhaps prolonged contact is sometimes necessary to produce a positive skin reaction. This idea awaits experimentation and development. It may further the application of the patch test to a larger group of clinical conditions.

INTERPRETATION OF THE PATCH TEST

The interpretation of the test is important and there are several factors that must be kept in mind. The question arises as to what comprises a positive reaction. To be considered positive there must develop an area of dermatitis. There should be itching, erythema, and vesiculation as in ordinary clinical dermatitis venenata. However, there are certain reservations that must always be held in mind in interpreting the results of the tests. These have been well summarized by Sulzberger and Wise. While a dermatitis at the site of the test means hypersensitiveness, certain conditions must be met before one is justified in concluding that the specific substance used is responsible for the eruption. Care must be taken to identify a positive reaction from a dermatitis due to the adhesive tape. The two lesions are separated by a line of normal skin which has been protected by the oiled silk. Even though a test be positive, it is without meaning unless the history indicates that the patient comes in contact with the substance.

The patch must also correspond to the eruption being investigated. The test must, therefore, result in a dermatitis in order to be positive.

Prevention of contact must be followed by disappearance of the dermatitis. It must be recalled that sensitization is frequently polyvalent. This merely means that contact with all substances to which the patient is sensitive must be avoided.

REPORT OF CASES

The following brief case reports will illustrate some of the clinical problems with which one comes in contact.

CASE 1.—Miss A. M. Age, twenty-six years. Complained of eruption of face and neck; duration, off and on, for one month. Past history negative except for several attacks of "poison oak." Examination showed marked erythematous, scaling dermatitis of face and neck. No vesiculation. Lids markedly swollen. Skin and mucous membrane otherwise negative. Patch test with contacts. Rouge was positive, with marked vesiculation. Discontinuance of the rouge was followed by prompt relief. There have been no further attacks for six months.

* * *

CASE 2.—A. N. Painter. Age, fifty-four years. Complained of eczema of hands and face. Duration, two months. He has been a painter for thirty-five years. Examination showed a scaly and vesicular dermatitis of face, neck, and hands. There was a definite line of demarcation between involved and normal skin at root of neck and wrists. He had been using a turpentine substitute composed of petroleum distillate and pine oil. Patch tests with these two substances gave marked bullous eruptions. Distillate is a primary irritant. The pine oil in the dilutions which were used did not provoke an eruption on normal skins.

Avoidance of contact with the turpentine substitute was followed by prompt relief.

SUMMARY

In conclusion, we may say that the patch test gives us a simple method of segregating certain cases of eczema and establishing the identity of the offending substance or substances. We will briefly summarize the conditions that must be fulfilled:

1. There must be history of contact.
2. The result must be some variety of dermatitis.
3. Removal of the substances must cure the patient.

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DISCUSSION

FRED FIRESTONE, M. D. (Medico-Dental Building, San Francisco).—As one interested in allergic diseases, it affords me great pleasure to discuss Doctor Graves' interesting paper, for the coincidence reveals the close relationship of allergy to the complicating dermatoses.

The generalized acceptance of the patch test in the armamentarium of the dermatologist, as expressed in Doctor Graves' paper, is very timely. The simplicity of the test warrants its use. The close adherence to the three postulates, as emphasized by the author, is imperative to proper interpretation. History of contact cannot be overemphasized. There is merely one warning to be added in the contact history, for it has been shown by Dr. Henry W. Straus that infants may be artificially sensitized to poison ivy, provided there was a previous contact. Further, it has been shown in pollen dermatitis cases that often it is necessary to have a prolonged contact with the pollen oil, and that the actual lesion of the dermatitis may not appear for a period of several weeks.

The second postulate that the resultant lesion of the patch test must simulate the original dermatitis

goes without saying; and third, that the removal of the offending excitant with a clearing of the lesion, and the recurrence with contact clinches the diagnosis.

The greatest field of usefulness of the patch test comes in the group designated as dermatitis venenata, as specifically demonstrated by poison ivy, poison oak, sumac, and primrose. The occupational dermatitis cases due to irritants handled offers a great field, as emphasized by varnish, turpentine, boxwood, cedar wood, dyes used in furs and woollens, anilin dyes and paints. Personally I have treated a dermatitis due to henna and inecto used by one of the operators in a hair-dyeing parlor. Sulzberger and Kerr recently demonstrated trichophytin hypersensitivity of the urticarial type, with circulatory antibodies and passive transference, and advocate the use of Hoechst trichophytin paste* as part of the routine investigations of urticarias of unknown etiology.

Furthermore, the great variability of skin hypersensitivity in different individuals to the same excitant and the degree of reactions at varying intervals cannot be stressed too strongly, so that often testing is absolutely necessary to bring proper results.

Too much emphasis cannot be brought to bear on the significance of using varying dilutions of the known allergen as a means of determining the degree of sensitization, as shown by Spain, and thus affording an indication of the dose to be used in attempting desensitization.

I concur in my opinion with Ramirez and Eller, who state that the patch-test method of testing is superior to other methods in determining sensitization to contact excitants, and particularly those of nonprotein nature.

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NORMAN N. EPSTEIN, M. D. (Four Fifty Sutter Building, San Francisco).—The use of the patch test in an attempt to determine a specific etiologic cause for a dermatitis venenata is certain to come into more general use because of its simplicity and ease with which it can be performed. While it cannot be hoped that it will solve the question of eczema or dermatitis, still it will segregate a few more cases from that large group which is now classified as eczema.

Doctor Graves has spent a great deal of time and study in applying the patch test. His paper is timely and should stimulate many of us to a more frequent use of the method.

Of particular interest is the possible application of the patch test to certain industrial cases. We have all had to deal with the problem of the painter who, after following his trade for many years, develops a dermatitis which recurs repeatedly when he comes in contact with materials which formerly caused no effect upon his skin. From a clinical standpoint this patient has become sensitized to these irritants, due to prolonged and repeated contact. If it can be shown by the patch test that the irritant is a specific one and the removal of this will allow the patient to continue his work, a great good will have been accomplished.

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SAMUEL AYRES, JR., M. D. (2007 Wilshire Boulevard, Los Angeles).—We have employed the patch test for several years in determining the etiology in cases of contact dermatitis, and I can endorse all that has been said by the author and the previous discussers. In the past we have all been too prone to jump at conclusions as to cause and effect upon such unreliable evidence as clinical appearance and history. Since the use of the patch test we have been afforded some very interesting surprises, and many substances hitherto unreported as causes of dermatitis venenata have been incriminated by this technique. Like Doctor Firestone, we have also encountered a case of dermatitis venenata in a beauty-shop operator who was found by patch test to be strongly sensitive to red and bronze henna and also to inecto. Another incident illustrating the value of these tests was in the case of two dentists seen within the same week, both complaining of an erythematous-squamous and fissured

* Imported by Metz & Company, New York City.

eruption of the hands and fingers. The natural impulse was to attribute the eruption to novocain. A patch test of this substance on one dentist was positive, thus confirming the clinical diagnosis, while the other failed to react. A careful microscopic examination of scales from the hand of the second dentist revealed large numbers of fungi, thus substantiating the accuracy of the negative patch test to novocain. The appearance of the eruption in both cases was strikingly similar, and I feel that a differentiation on clinical grounds alone would have been impossible.

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DOCTOR GRAVES (Closing).—The discussers have emphasized the important points, so that little more need be said. The application of the patch test to dermatitis venenata is apparent. It is to be hoped that refinements of the test will enlarge its scope of usefulness.

The use of this test by means of prolonged contact may demonstrate a reaction in some cases of "chronic eczema." These may then be classified as chronic dermatitis venenata. In this manner the applicability of the term "eczema" can be further restricted.

CALCULOUS ANURIA*

REPORT OF CASE

By EDGAR C. LEE, M. D.
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DISCUSSION by Nathan G. Hale, M. D., Sacramento;
A. J. Scholl, M. D., Los Angeles; Franklin Farman,
M. D., Los Angeles.

ONE of the most serious complications arising in renal lithiasis is anuria. The conditions in which complete cessation of urinary secretion occurs have long been recognized, but it may be permissible to briefly review them.

First: Both kidneys may simultaneously become obstructed by stone.

Second: The obstruction may affect a single kidney, the opposite kidney being congenitally absent or renal function having been previously destroyed by disease.

Third: A fused ureter draining both kidneys may become blocked.

Fourth: A reflex anuria may occur, the obstruction to one kidney resulting in a reflex inhibition of kidney function on the opposite side.

Some of the salient points in the clinical course of calculous anuria were well shown in a case recently observed by the writer.

REPORT OF CASE

The patient was a man forty-five years of age, who was admitted to the hospital on the 28th of June, 1929. He was a well-developed man who worked as a laborer; his weight was 170 pounds, and he had always been in good health. There was no history of any previous symptoms referable to the urinary tract. The onset of his illness began two days before he was admitted to the hospital and was characterized by diffuse abdominal pain radiating toward the right flank. This was accompanied by nausea and vomiting; the pain subsided after a few hours, but the vomiting was persistent.

Examination at the hospital showed abdominal distention with marked rigidity of the abdominal muscles, no area of pronounced tenderness was made out

either in the abdomen or in the region of either kidney, and there were no other physical findings.

The pulse rate was 72; temperature, 97.6; blood examination showed 4,120,000 red cells and 9900 leukocytes with a differential count of 85 per cent polymorphonuclear cells. The hemoglobin index was 70 per cent; the blood pressure was found to be 160 over 110.

On this day he voided eight ounces of urine. The specimen was brownish in color and showed a faint trace of albumen and no sugar. The centrifuged specimen showed many red blood corpuscles and a moderate number of epithelial cells and leukocytes.

Roentgenologic examination of the urinary tract revealed a shadow of stone density about five to seven millimeters in size in the region of the right kidney. On the left side, at the level of the first lumbar transverse process, a faintly outlined shadow was shown, the character of which was not determined; it was not of stone density and suggested a partially calcified mesenteric gland.

An enema afforded the patient considerable relief from his abdominal distention and his general condition appeared good, nausea and vomiting being at this time the outstanding symptoms.

The blood chemistry which was done on the following day showed 59 milligrams of urea nitrogen per 100 cubic centimeters of blood with a 2.5 milligram of creatinin.

A cystoscopy on this day showed 40 cubic centimeters of dark-colored urine in the bladder. The bladder mucosa was normal throughout, the right ureteral opening appeared somewhat swollen, and the left ureteral opening was not visualized. A No. 6 catheter passed to the level of the right kidney pelvis without meeting any obstruction, but it was not possible to establish any urinary drainage through the catheter. Ten cubic centimeters of indigo carmin were injected intravenously, but there was no return of the dye from the catheter in the right ureter nor was any dye observed being brought into the bladder from the left side. On the afternoon of this day the patient voided twelve ounces of urine, the character of which was similar to the specimens examined previously.

Fluids were given freely, the patient being able to retain water by mouth; and the rectal drip was well tolerated. The abdominal muscles were now comparatively relaxed, and nausea, though recurring at intervals, was not enough to prevent the patient from taking water by mouth.

During his third day in the hospital he voided three ounces of dark-colored urine. His general condition remained good and he was apparently relieved of his previous abdominal distress.

There was no further renal secretion during the next three days in spite of which no symptoms suggestive of uremia developed. Glucose solution was given intravenously; the patient's skin was moist and there was no apparent change in his general condition. On this day the blood chemistry showed a rise of urea-nitrogen to 140 milligrams per 100 cubic centimeters of blood; the creatinin curve reached 6.8; the patient, who had been advised previously regarding surgical treatment, then consented to an operation.

Under ethylene-oxygen anesthesia the right kidney was exposed and found to be greatly engorged with the capsule very tense. A nephrotomy was done by an incision over the convex border of the kidney and the pelvis was explored for the presence of a calculus. As no stone could be palpated, no prolonged search was made and a soft drainage tube was placed in the pelvis through the kidney incision and the wound was closed in the ordinary manner. Before the operation was completed there was free drainage of blood-stained fluid through the tube.

The patient was returned to his room from the surgery at 2:30 p. m. and 1000 cubic centimeters of normal saline solution was given intravenously. By

* Read before the Urology Section of the California Medical Association at the sixtieth annual session, San Francisco, April 27-30, 1931.

6 p. m. the drainage through the tube measured 690 cubic centimeters, and during the next twelve hours 4590 cubic centimeters of blood-stained urine was collected from the tube, in addition to which there was considerable drainage into the dressings. During the following twenty-four hours the amount of urine collected measured 3060 cubic centimeters and on this day, the second following the nephrotomy, blood chemistry showed a reduction of the urea-nitrogen to 18 milligrams per 100 cubic centimeters of blood, and creatinin had dropped to 1.3 milligrams per 100 cubic centimeters. The next period of twenty-four hours showed a secretion of 2800 cubic centimeters of urine after which the total amount for twenty-four-hour periods varied from 2030 to 2090 cubic centimeters.

The patient's subsequent progress was uneventful. The tube draining the kidney was removed on the fifth day. The wound healed well but for a small urinary sinus which discharged small amounts of urine intermittently, but closed at the end of about twenty days.

Sixteen days following the day of operation five cubic centimeters of indigo carmin were given intravenously and a cystoscopy showed that the dye was being secreted from the right ureteral opening in normal time and good volume.

A roentgenogram showed the small opacity previously reported in the right kidney area to be now located at the level of the middle portion of the sacrum on the right side.

The patient's convalescence was rapid; he returned to his work and was not under observation until seen a year later. At this time a roentgenogram showed no shadow suggestive of a calculus. The urine analysis was negative. One cubic centimeter of phthalein intramuscularly showed a return of 85 per cent of the dye in two hours and fifteen minutes. Forty grams of uroselectan were given intravenously and a roentgenogram showed a clear outline of kidney pelvis and major calices on the right side, whereas no opacity was observed on the left side.

COMMENT

A sudden suppression of urine due to obstruction caused by calculus may be partial or complete. It was formerly thought that a sudden blocking of the ureteral tract would lead to an immediate suppression, but it is now considered that the condition resulting is one of retention in the ureter and renal pelvis. This retention may be of varying degree and the intrarenal pressure resulting is the causative factor in bringing about total suppression of secretion.

Calculus anuria is generally considered to be the result of mechanical obstruction. The question of reflex inhibition has been a much debated one. Many case reports would tend to prove the occurrence of reflex anuria, but autopsy findings do not support these views, and only these case reports can be accepted as proof of an inhibited secretion in which the reflexly inhibited kidney was shown to be healthy. It is assumed that reflex anuria results from contracture of the intrarenal vessels which have received their impulse from the vasomotor nerves. Anuria following burns, abdominal trauma, and operations on the kidney and bladder, is explained by stimulation of the splanchnic nerves.

Frank concluded that reflex inhibition of function occurring in a healthy kidney can be explained on the basis of sudden circulatory changes, the compensatory vascular activity causing an overdistention from the arterial side with resultant venous congestion.

The majority of cases of calculous anuria occur in the middle-aged and the condition is more frequently seen in the male, but instances of children and infants suffering from this disease have been reported.

The onset is usually accompanied by pain in the region of the kidney which has become suddenly blocked, the severity and duration of the pain are quite variable, there may be all the characteristics of a severe renal crisis or the patient may complain of a dull ache in the lumbar region. Radiation of this pain along the ureter and toward the genitals is not a constant feature. Again there may not be any pain referable to either kidney region. There is usually a cessation of pain in a day or two and it would seem that this is dependent on an equalization of the pressure within the renal vessels. There may be some bladder irritation at this time with a frequent desire to void, though no urine or very little is passed.

The general condition of the patient is often quite unimpaired and this period of tolerance has been reported as lasting as long as twenty days. The average length of time of this period in a series of sixty-two collected case reports was from five to six days. During this stage the patient may be entirely free from pain and mentally clear, dryness of skin, gaseous distention of the bowels, nausea and vomiting, being the only symptoms complained of. It has been observed that this period is prolonged in cases of hydronephrosis. The onset of the uremic period may occur without warning, or such symptoms as drowsiness, headaches, and muscular twitchings may foretell the impending change.

DIAGNOSIS

Regarding the diagnosis it must be remembered that there may not be anything in the previous history to suggest the renal secretion was previously limited to one kidney.

Pain and anuria, either complete or partial, are the characteristic symptoms of the disease, and the severity and location of the pain will suggest on which side the sudden blocking has occurred. The roentgenographic findings of a shadow of stone density and the localization of the shadow by means of an opaque catheter are the first steps toward the diagnosis; with this in view it is well to routinely make two exposures for the purpose of a stereoscopic view.

In a review of seven cases, Cahill and Gile state that in only three patients were the roentgenographic findings sufficiently characteristic of calculus to form the basis of a diagnosis.

Cystoscopy may show the impacted calculus at the ureterovesical orifice or the absolute block to the further advance of the ureteral catheter may localize the position of the stone.

Intravenous injection of a dye following the forcing of fluids will show the failure of renal secretion from both ureteral orifices. The use of opaque solutions for further outline or localization of the stone should not be necessary and may prove harmful. It is to be remembered that

an impacted calculus may completely block the drainage of fluid from above and yet permit the passage of fluid injected from below the point of obstruction.

The changes in the blood chemistry are dependent on the duration of the anuria. Urea-nitrogen and creatinin retention is of the rapidly cumulative type and since the basic kidney substance has not been destroyed a prompt change toward the normal will usually follow the relief from obstruction.

TREATMENT

The treatment toward the relief of the anuria will necessarily be medical at the onset. Hot packs and the administration of fluids subpectorally or intravenously have been the usual procedure, and five per cent glucose solution has been employed for the diuretic effect.

The use of the duodenal tube in the treatment of a case of reflex anuria was reported by McCarthy. Following the administration of five per cent glucose and two per cent sodium bicarbonate, through the duodenal tube, there was an immediate and marked increase in renal secretion.

Ureteral catheterization has been effective in a number of cases in establishing drainage and causing a return of renal function, and the use of the indwelling ureteral catheter over a period of twenty-four to forty-eight hours has been suggested.

The expectant treatment should not be carried on longer than two or three days and the apparent condition of well-being on the part of the patient should not misguide us regarding the necessity of surgical relief.

Increased mortality accompanying longer duration of this period is an established fact.

A nephrotomy will be the means of establishing drainage when the expectant treatment has failed, and with this accomplished, if a small stone is not readily found, further and prolonged exploration of the kidney in search of the stone should be avoided.

Retrograde catheterization of the ureter may displace a ureteral calculus, but the fact that one may be dealing with a solitary kidney should be borne in mind.

Medico-Dental Building.

DISCUSSION

NATHAN G. HALE, M. D. (Medico-Dental Building, Sacramento).—Relief of back pressure and removal of the cause is the modus operandi for all types of cases of calculous anuria. Fortunately in this case there was prompt relief of back pressure. The calculus no doubt passed at a later date and caused no obstruction during its passage.

Calculous anuria in a solitary kidney as this case report presents requires no different management than that of a calculous anuria when there has been a previous nephrectomy. Promptness in operative interference is more liable to be overlooked by the general surgeon, who does not bring to his aid the urologist, whose first thought in any obstruction of the upper urinary tract is usually, "What is the other kidney doing?" In this case there was apparently no other kidney, and prolonged delay would no doubt have resulted in greater impairment of kidney function.

A. J. SCHOLL, M. D. (Pacific Mutual Building, Los Angeles).—This paper is timely in that it again presents an old subject for a very necessary review, and reminds us that such conditions still occur and must be recognized. Calculous anuria is the term used to denote suppression of urine which results from the presence of a stone in the kidney or ureter. Before our present day of accurate methods of urologic diagnosis this condition was not infrequently encountered. It is now only rarely observed, as most patients receive treatment before such a stage is reached. On the other hand, anuria occasionally affects persons in robust health and may be sudden and complete in its onset. It still is responsible for the majority of deaths occurring in large series of stone cases such as have recently been reported.

The most important clinical feature of a case of calculous anuria is the fact that it denotes that the patient possesses only one functionally active kidney, the other being absent or destroyed by previous disease. The only exceptions to this rule are those cases in which the shock arising from the sudden blocking of the ureter gives rise to a so-called "reflex suppression" in the opposite kidney which, although functionally active, has suffered from previous disease and so has become more susceptible to any nervous influence.

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FRANKLIN FARMAN, M. D. (1401 South Hope Street, Los Angeles).—Doctor Lee's remarkable case of calculous anuria with recovery following nephrotomy prompts me to briefly cite the circumstances surrounding a similar case.

In August 1925 I was called one night to see a woman, age sixty-two, who was suffering intense right renal area pain and colic. She had passed diminishing quantities of highly colored urine for several days with total anuria for twenty-four hours. The abdomen was greatly distended, tympanitic, and a large, sensitive mass could be made out in the right upper quadrant. She was restless, tongue dry, breath foul, and slightly uriferous.

The attending physician, a relative, informed me that the patient had gone through similar, less serious attacks, and that it had been previously determined by cystoscopy, x-ray, and functional tests that the left kidney was probably atrophic and nonfunctioning. With this history and the present grave condition of the patient, we determined upon an emergency nephrotomy. The patient was removed by ambulance to the California Hospital and at midnight I performed, under spinal anesthesia, a nephropelotomy of the right kidney, draining a large hydro-nephrotic sac of the pelvis and lower pole. As in Doctor Lee's case, no prolonged search for calculi was attempted and, likewise, none found, but it was later determined by x-ray that there were many calcareous-like deposits apparently present in the right kidney.

The patient reacted poorly, with continued manifestations of uremia for two days, but finally passed the "crises" following blood transfusion. No bladder urine appeared for twelve days, all drainage coming through the right nephrotomy wound, proving beyond doubt that the left kidney was functionless. The patient recovered, leaving the hospital within one month.

The points that impress me about calculous anuria and anuria in general is the remarkable tolerance of the body to uremic poisoning, patients being known to recover after twenty days of total suppression of kidney excretion. Of course, partial compensatory elimination takes place during this period through the bowel, skin, and lungs.

Likewise, the need for conservative "nonpanicky" management in instances of anuria is obvious and one should be guided in operative indications as much by a general estimate of the patient's condition and type of kidney lesion involved as by laboratory tests indicating rising blood nitrogen retention. But when the indication is apparent prompt nephrotomy is a life-saving measure.

PERINEPHRITIC ABSCESS—COMPLICATING POLYCYSTIC KIDNEY*

REPORT OF CASE

By MORRELL VECKI, M. D.
San Francisco

DISCUSSION by Thomas E. Gibson, M. D., San Francisco;
A. A. Kutzmann, M. D., Los Angeles; Frank Hinman,
M. D., San Francisco.

ALTHOUGH relatively uncommon, polycystic disease of the kidneys is not rare. Preitz discovered sixteen in ten thousand autopsies. In a large majority of instances the clinical diagnosis is certain, with the signs of bilateral palpable renal tumors and renal insufficiency. It is surprising, nevertheless, how often the diagnosis is not made until the patient reaches the operating or autopsy table. Lejars reported that in sixty-two cases only five were correctly diagnosed during life. Since then, with increased knowledge and the aid of special methods of clinical examination, the percentage has grown much higher. Pyelography has played a very important part. Braasch¹ in 1916 reported that polycystic kidneys could be identified from the pyelograms alone in one-half of the cases.

COMMENT ON LITERATURE

Complications are not uncommon; in fact all that develop in a normal kidney can invade a polycystic kidney. Among the most common are suppuration, calculus, and tuberculosis. Ordinary suppuration is relatively frequent. Sieber reported 21 in 212 cases, or 10 per cent; Brin cited 23 in 324 cases, or 7 per cent; Chevassu² found 88 cases reported in the literature. Cabot³ stated that sepsis was uncommon, being present in only two per cent of a reported series of ninety-eight cases. The causes for infection are the same as those in normal kidneys and appear at a period when the normal kidney is the most liable to infection. Davis⁴ claims that infection usually follows an increase in size of the cysts, resulting in interference with drainage. He believes it is present in 80 per cent of adults. Tenenbaum⁵ claims that deformities of the pelvis and dislocation of the calyces favor urinary stasis and infection. Chevassu emphasizes the importance of ascending infection. He believes that many polycystic kidneys have been infected by ureteral catheterization through infected bladders, and advises against cystoscopy unless absolutely indicated. Trauma has been mentioned as a causative factor in suppuration. Suppurative polycystic kidneys vary markedly as to the character, extent and location of the infection. There may be little abscesses of the kidney without pus in the cysts. The cysts may be suppurated without any involvement of the pelvis; in fact negative urines may be drained from kidneys riddled with suppurative cysts. Infection may be cortical or medul-

lary, the cortical type having the tendency to bulge the capsule. An infected cyst may rupture and cause a perinephritic abscess.

Although several cases of so-called perinephritis, including three by Chevassu, were reported, I was able to find in the literature only three cases of true perinephritic abscess, complicating polycystic kidneys. Atonna and Morrissey⁶ report that they operated to drain a perinephritic abscess and discovered polycystic kidney disease. After adequate drainage the patient improved. The other two cases, one described by Richer⁷ and the other by Andre and Francfort,⁸ were associated with calculi. Richer's patient had two small calculi, and Andre and Francfort reported a very large calculus. It may be interesting to add that Malcolm⁹ had a patient who developed peritonitis, with recovery after drainage. The case to be reported is one in which the abscess developed as a complication of the rupture of a large suppurating cyst located in the upper pole of the kidney.

DIAGNOSIS

When suppuration complicates polycystic kidney disease, especially abscess, the diagnosis naturally becomes more difficult. First of all, because polycystic kidneys are relatively uncommon, and secondly, because the classical bilateral enlarged kidneys cannot be readily palpable due to subsequent fixture and tenderness of the mass. In other words, the invasion of the infected material obscures the original picture of the polycystic disease. Chevassu claims that the diagnosis is rarely ever made clinically, but we can hardly agree with that statement now because of development of more accurate means of diagnosis, principally the pyelogram.

TREATMENT

It is generally known that treatment for polycystic kidney disease is unsatisfactory and that medical treatment is more satisfactory than surgical. The opinion of most authorities, however, is that it is necessary to operate in unilateral suppurative cases whenever the pain and fever persist in spite of all treatment, both palliative and cystoscopic. Analysis of operated cases have shown that the mortality for nephrotomy, nephrostomy or nephrectomy is over 30 per cent. Chevassu advises nephrotomy, at least as a preliminary procedure, which he admits is only satisfactory when there are few cysts, and to later perform a nephrectomy, but only if the resistance of the patient is good and if the opposite kidney is functioning well. Obviously it must be assumed that the unoffending kidney is also polycystic. He reports recovery after one year in eight cases, three nephrotomies, two nephrotomies with secondary nephrectomies, and three primary nephrectomies.

REPORT OF CASE

Mrs. M., age forty. Referred by Dr. A. S. Keenan. Entered the hospital on March 13, 1930, complaining of knife-like pains in the right loin and suprapubic region and passage of large blood clots on urination.

* Read before the Urology Section of the California Medical Association at the sixtieth annual session, San Francisco, April 27-30, 1931.

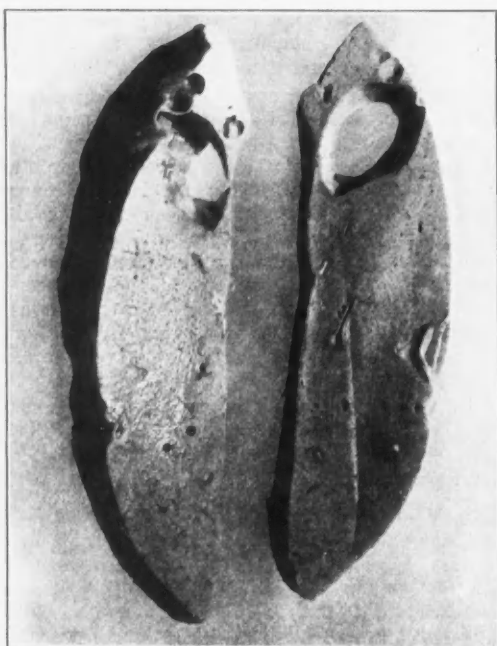


Fig. 1.—Cut section of liver, showing largest cyst opening.

Family History.—Negative. Four children living and well.

Past History.—Negative, except for a kidney complication nine years ago during pregnancy. Since then she has had intermittent attacks of pain in the right kidney region.

Present Illness.—During October 1929 the patient began to have severe throbbing pains in the right loin, accompanied by chills and fever with nausea and vomiting. She was sent to a hospital and the diagnoses of perinephritic abscess and chronic nephritis were made. Operation was advised, but refused. After a month of treatment, consisting of rest, forced fluids, and hot compresses, she was discharged very much improved, believing that the abscess had "broken."

During January 1930 the patient experienced a similar attack, and the following month another attack accompanied by slightly bloody urination. These last two attacks did not disturb her, but on March 6 she was forced to go to bed because of acute knife-like pains in the right kidney region, accompanied by hematuria, with chills and fever, vomiting and general weakness. These symptoms continued until her entry into St. Francis Hospital on March 13.

Physical Examination.—Patient appeared very ill, septic and pale. Temperature, 100.4; pulse, 96; respiration, 20. Head, neck, and chest negative. Blood pressure, 115/70. Abdomen: Upper right side of abdomen and loin markedly rigid, almost board-like and very tender to palpation. Left side of abdomen was rigid and tender, but less so than the right. It was impossible to palpate the kidneys or feel any masses. The suprapubic region was moderately tender.

Urinalysis.—Specific gravity, 1010; acid. Albumen, 1 plus. Microscopic: Casts, 0; white blood cells, numerous; red blood cells, 20 to 30 per hpf.; numerous bacteria and amorphous urates. Culture: Colon bacilli, gram positive cocci. No tubercle bacilli found.

Blood Counts.—Hemoglobin, 42 per cent; red blood cells, 2,700,000; white blood cells, 21,000; neutrophils, 87 per cent. Wassermann: negative.

Phenolsulphonephthalein Test.—Hour first, 125 cubic centimeters. No reaction. Hour second, 100 cubic centimeters. Very faint reaction.

Blood Chemistry:	Milligrams Per 100 c. c.
Urea nitrogen	225
Nonprotein nitrogen	250
Creatinin	12
Uric acid	13.3
Sugar	166.7
Chlorids	475.0
CO ₂ combining power	45.0

Plain Roentgenography.—Neither kidney well outlined, the right considerably larger than normal, showing area of calcification apparently due to stone.

Cystoscopy.—March 15. Novocain, four per cent. Bladder capacity, 300 cubic centimeters. Inspection of bladder showed marked diffuse granular cystitis. Both ureteral orifices were located with difficulty, but were normal in appearance and catheterized easily with No. 6's. No drainage from right pelvis. Left pelvis drained fairly well with clear urine. One cubic centimeter phthalein injected intravenously. Very faint trace of the dye appeared after eleven minutes. Urine from left kidney showed six to eight pus cells per hpf., and numerous bacteria. A pyelogram was not made because of the patient's poor condition. There was no reaction.

Operation.—The patient was sent to surgery on March 18 with the preoperative diagnosis of "acute suppurative nephritis and perinephritic abscess." Although the prognosis seemed hopeless and in spite of the fact that the left kidney was obviously useless, an operation was done in order to release the pus, thereby alleviating the pain, giving the right kidney a chance to rally in case there was any normal tissue left.

Under nitrous oxid anesthesia, a lumbar incision was made and carried down to the superior lumbar triangle, which was opened, and immediately about 500 cubic centimeters of pus was released. The opening was widened, but further exploration was not made because of the patient's poor condition. Drains were inserted and the wound was closed. She failed to rally. Death took place on March 30, on the twelfth day postoperative.

Necropsy.—By Dr. A. M. Moody. Some emaciation. Latent tuberculosis of left apex which was adherent at apex only. Right lung adherent posteriorly to upper lobe (easily torn fibrous adhesions). Heart and liver: Cloudy swelling.

Congenital cysts in liver (both lobes) innumerable, varying in size from one to four centimeters in diameter (Fig. 1). Few small cysts microscopic in size were found in pancreas. Uterus, fallopian tubes, ovaries, appendix: No noteworthy changes.

Polycystic kidneys, right perinephritic abscess and pyonephrosis. The left kidney weighed 780 grams and measured 17 by 9.5 centimeters. No normal renal tissue present. The mass was made up of innumerable cysts, varying from one millimeter to over three centimeters in size. No suppuration seen (Fig. 2).

The right kidney weighed 960 grams and measured 19 by 8.9 centimeters. No normal renal tissue present. Innumerable cysts, varying from 1 millimeter to 4.5 centimeters in size. All were filled with purulent material except five or six which contained blood-clots. One cyst at the upper pole had been ruptured, releasing pus into the perinephritic region. No stones were found (Fig. 3).

SUMMARY

1. Polycystic kidney disease is neither rare nor difficult to diagnose.

2. Suppuration is a frequent complication and when present the diagnosis becomes difficult because the original picture is masked.

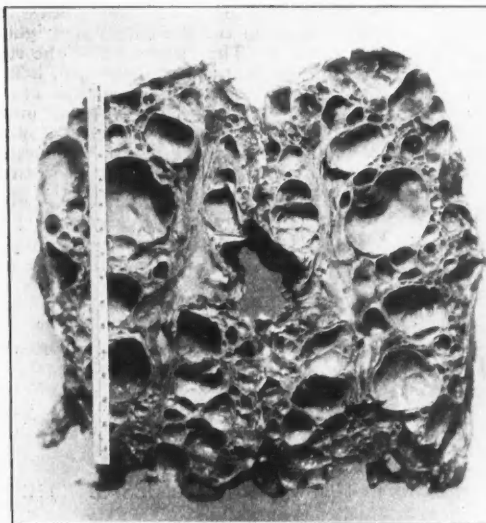
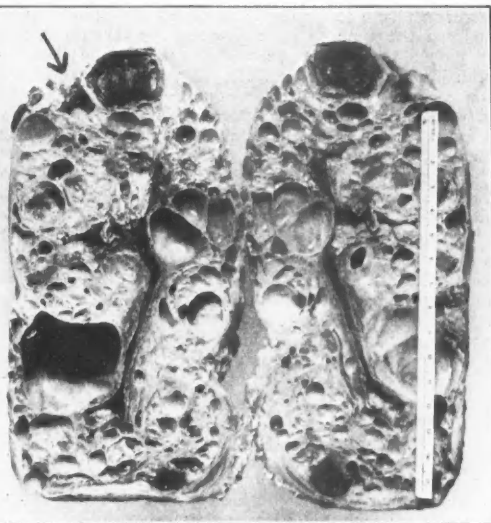


Fig. 2.—Cut section of left kidney (polycystic).

Fig. 3.—Cut section of right kidney (polycystic).
Arrow points to ruptured cyst.

3. A case of perinephritic abscess in a polycystic kidney unrecognized in life is presented. The abscess is demonstrated to be the result of a ruptured suppurating cyst.

450 Sutter Street.

REFERENCES

1. Braasch: Surg., Gynec., and Obst., 23:697, 1916.
2. Chevassu: J. d'Urol., 11:373, 1921. Abstract, J. A. M. A., 77:651 (August 20), 1921.
3. Cabot: Case 15052, New England J. Med., 200:243 (January 31), 1929.
4. Davis: Am. J. Obst. and Gynec., 9:758, 1925.
5. Tenenbaum: New York State J. Med., 27:641, 1927.
6. Atonna and Morrissey: Ann. Surg., 84:846, 1926.
7. Richer: J. d'Urol., 10:219, 1920.
8. Andre and Francfort: J. d'Urol., 28:170, 1929.
9. Malcolm: Brit. M. J., 1:879 (June 24), 1916.

DISCUSSION

THOMAS E. GIBSON, M.D. (450 Sutter Street, San Francisco).—Polycystic disease of the kidneys is nearly always bilateral and in its effect on kidney structure and function may be likened to bilateral hydronephrosis, the difference being that in the former there is intrarenal, and in the latter, extrarenal obstruction to urinary drainage. In either case the result is the same, namely, interference with the free drainage of urine resulting in back pressure with atrophy of the renal parenchyma and consequent progressive reduction of function. This gradual reduction in function naturally in time exhausts the reserve power of the kidneys so that a uremic or suburemic state usually supervenes even without the burden of superimposed diseases. This happens most commonly in early middle age, sometimes at a later date, although occasionally such an individual will live out a normal life span without showing evidence of renal impairment. Thus it is seen that polycystic disease is an exceedingly grave one, particularly so when other diseases become superimposed on the already damaged kidneys, as in the case described by Doctor Vecki. Polycystic kidneys are subject to the same diseases as the normal kidney. Their treatment calls for grave consideration. There is no question as to the advisability of draining a perinephritic abscess, but there is considerable difference of opinion among

urologists as to whether nephrectomy is ever indicated in any disease affecting a polycystic kidney. Certainly the indications for nephrectomy in diseases affecting the normal kidney are not applicable in the polycystic kidney.

From a questionnaire sent out to members of the American Urological Society by Meltzer (1929) reports of one hundred and eleven cases of polycystic kidneys presenting unilateral surgical symptoms were obtained. In this series nephrectomy was done in fifty-nine cases, Rovsing cyst puncture in thirty-one cases, and such procedures as decapsulation, nephrotomy, etc., in the remainder. Unfortunately the author did not correlate the results with the particular type of treatment, but taking the group as a whole, twenty-four were alive from three days to six months after operation, twenty from six months to two years, forty-four from two to eight years, and nine from nine to fifteen years. In Young's "Urology" twenty-two cases are reported in which nephrectomy or nephrostomy was done. The mortality was 31.8 per cent, and only two patients were alive after two years. Such statistics show that the outcome of surgical intervention may be occasionally successful, but nephrectomy should be attempted only under the most urgent indications and not until it has been determined that the opposite kidney is functionally capable of carrying on.

A. A. KUTZMANN, M.D. (1930 Wilshire Boulevard, Los Angeles).—Doctor Vecki has added a timely clinical report to a rapidly accumulating literature on polycystic kidneys. Clinical reports in recent years have shown that polycystic kidneys may fall heir to the same gauntlet of surgical diseases as normal kidneys. There naturally arises, then, the question of judgment in such cases that may require surgical treatment. This will, therefore, demand more careful thought on the part of the urologic surgeon than in the normal type of case, inasmuch as this type of patient is already surgically handicapped without whatever superimposed pathology may have been found. Individuals with polycystic kidneys without any complications are already laboring with a limited anatomicophysiological process. The amount of secreting renal tissue is very much limited so that we find deficient kidney function and probably no possible renal reserve as to available compensatory function and anatomical hypertrophy. Elective surgery would,

therefore, have to be limited only to emergency cases such as the type of case reported by Doctor Vecki or where there may be considerable acute distress from hematuria, calculus, etc. It would appear to me that such a procedure as nephrectomy would practically never be indicated. My experience with surgery in polycystic kidneys is limited to several cases in which Rovsing's operation of multiple cyst punctures was carried out. From the results, I have concluded that the patients would have gotten along just as well without my interference.

Where operation is absolutely necessary it is well to consider carefully the anesthesia used. Ether, especially, is contraindicated, and general anesthesia such as ethylene-oxygen and nitrous oxide oxygen anesthesia as well as such regional anesthesia as spinal, paravertebral block, and local, should be considered of choice so as to keep at a minimum the additional load on the already deficient renal system. It is remarkable how well many individuals with polycystic kidneys will get along even though there is a very low phthalein output and a blood nitrogen above normal. In conclusion permit me to say that elective surgical procedures be kept at an extreme minimum in patients with polycystic kidney disease and limited only to such emergency cases that demand immediate attention.

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FRANK HINMAN, M. D. (384 Post Street, San Francisco).—The case of Doctor Vecki presents some interesting points in differential diagnosis. The clinical history—a woman of forty-one, recurrent right renal colic for the last five months accompanied by hematuria and chills and fever, the last and most severe attack one week before entry—points to trouble in the right kidney, no trouble in the left. The septic condition, normal blood pressure, secondary anemia with leukocytosis and urinalysis (pus, blood, specific gravity 1010, slight albumen, no casts, many bacteria), together with this history suggests an infectious nephritis and not Bright's, and the physical examination indicates perirenal extension.

Subsequent urogenital studies confirm this but, in the light of the known operative and autopsy findings, should have gone farther possibly in interpretation of the true condition.

The total renal function is practically nothing, but there is no anuria or even oliguria. The amount of 225 cubic centimeters in two hours is a good output. With such marked sepsis and renal insufficiency a hypersecretion without hypertension suggests bilateral hydronephrosis, bilateral solitary cysts or polycystic disease. The blood nitrogen retention of 250 milligrams with a creatinin of 12 milligrams supports this view. Renal insufficiency must be of long duration and not recent or acute to allow of such retention. Plain x-rays are negative, ruling out bilateral staghorn calculus. On ureteral catheterization the left kidney showed a free output of clear urine with few pus cells and many bacteria but no phthalein, thus clearly indicating the bilateral nature of the renal insufficiency. As a confusing finding the right kidney failed to function, but there was no evidence of pelvic retention on either side, thus ruling out bilateral hydronephrosis. Had pyelograms been taken or intravenous pyelography done, no doubt a correct preoperative diagnosis would have been made. Under the circumstances it was, of course, of no consequence, but from the theoretical standpoint the findings which are reported seem to limit possibilities nearly to two conditions, bilateral solitary cyst or polycystic kidneys, complicated by a suppurative pyelonephritis with perinephritic abscess. Bilateral solitary cyst is very rare. A recent case had been diagnosed for over ten years as polycystic. The important distinction is that the one is curative, the other hopeless, and differentiation is only possible, as a rule, by pyelography.

The pictures of the kidneys on section indicate that the left kidney was more advanced than the right in polycystic degeneration. The larger size of the right may be due to the swelling and congestion of inflammation. This is interesting in explanation of the marked total renal insufficiency, the function of the better right kidney being totally lost on account of the complicating suppurative nephritis. The source of the renal infection is indicated neither by the history nor the postmortem.

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DOCTOR VECKI (Closing).—The futility of surgical interference in polycystic kidney was properly emphasized by the discussions of Doctors Gibson and Kutzmann and I must readily agree with them that it is only indicated in emergency cases.

Doctor Hinman pointed out that a more complete urological examination would have permitted a diagnosis before surgical intervention. The poor physical condition of that patient, however, had to be taken into consideration.

CONTUSION HEMORRHAGES OF THE BRAIN*

By A. M. MOODY, M. D.
San Francisco

THIS discussion will be limited to the type of brain injuries manifested by the presence of contusion hemorrhages or bruises. A few typical examples will be presented to illustrate the lesions in question. I wish to briefly present what these lesions are, where, and why they occur, and their importance. This report is based on gross and microscopic studies of seventy-eight brains examined in the pathological department of the coroner's office of the city and county of San Francisco.

PATHOLOGIC FACTORS AND CHANGES

Injuries to the brain occur as the result of the action of external violence applied either directly or indirectly to the cranium. The damage produced in the brain in any given individual will depend on the direction, point of application, and the amount of force, as well as the resistance of the individual. There are three principal factors concerned in natural resistance, *i. e.*, thickness and shape of the skull, condition of the blood vessels, and a great unknown quantity, the degree of sensitiveness of the brain to shock. For example, a blow from the fist of a prizefighter would kill one individual, yet when applied similarly to the head of one trained to withstand such blows it might have no appreciable effect.

Contusion hemorrhages, so called, are small hemorrhagic foci—usually visible to the naked eye—varying in size from that of a pin-point to several millimeters in diameter, but at times they may exceed one centimeter. They are usually present in the brain substance just beneath the pia mater, where they occur singly or in groups in the principal regions of injury, or they may be scattered here and there through the entire brain. There is no part of the brain in which they have

* Read before the Pathology and Bacteriology Section of the California Medical Association at the sixtieth annual session, San Francisco, April 27-30, 1931.

not been found in this series. Occasionally only deeply seated lesions are present.

For examination purposes, it is best to harden the brains in 10 per cent formalin solution before making a search for the *deeply* seated lesions. After fixation the brain is sliced transversely into sections not to exceed one centimeter in thickness.

These hemorrhages occur at the points of application of the forces concerned in the injury. They may be immediately beneath the point of application, opposite, or scattered, because of widely disseminated acting secondary forces within the brain. The location of the lesions is different in a falling body than in one which is stationary when the violence is applied. Time will not permit a detail discussion of the mechanics of the problem. Concussion forces, direct or transmitted, are largely responsible for this type of lesion through mechanical rupture of small blood vessels. If the blood vessels are diseased, then larger hemorrhages, immediate or delayed, occur.

These lesions are of importance, first, because they may cause death if properly located; second, they result in points of lowered resistance sufficient to account for the invasion of bacteria which may cause abscesses or meningitis or both; third, they account for later mental impairment of varying degrees; and fourth, they are pathognomonic signs of injury. In medico-legal work it is of great importance at times to determine whether death is traumatic or the result of natural causes. This series contains instances where both types of lesions are present.

The seventy-eight brains which were examined and which are herewith reported were removed from the bodies dead from known accidental and unknown causes, by Dr. A. A. Berger, autopsy surgeon. In other words, they were taken from a certain group which must pass through the routine of the coroner's office—such as persons killed in automobile, street-car and other accidents, suicides, homicides, fistic encounters, and those found dead on the bathroom floor, etc. Several with gunshot wounds of the head were included. Thirty-four of these dead persons had no skull fracture, while several of these had no evidences of injury to the scalp or pericranial tissues. Thirty-eight had fractured skulls and six of them had penetrating wounds as the result of gunshot.

There are seven instances of purulent meningitis complicating the injury. Two of these occurred in individuals without skull fractures.

The brain lesions in some were incidental to the principal causes of death. Where the events preceding death are unknown, one can oftentimes obtain considerable information about them by carefully noting the distribution of the lesions.

In conclusion I wish to state that this report is made merely to call your attention to a type of lesions commonly present in brains after seemingly trivial injury, but which may be of great importance from both medico-legal and clinical standpoints.

Saint Francis Hospital.

ON PREMEDICAL EDUCATION*

By I. MACLAREN THOMPSON, M. B.
Berkeley

MEDICINE presents itself as a study and as a profession. The study of disease is a pure science. The application of that science to the prevention of disease and injury and to the care of the sick and injured appertains to the profession of medicine, which hence deals essentially with an applied science. The medical applications of science may be considered as falling into at least two categories: (1) epidemiological, wherein attention is directed toward the *disease* as an entity, mankind being considered only in the mass; (2) clinical, wherein attention is focused primarily upon the *patient*, the disease being considered only in the light of its effects upon the person in question. In this latter, the ordinary type of medical practice, mankind is considered individually.

Disease is perhaps most helpfully thought of as a set of phenomena (structural or functional or both) occurring within the body (or mind) in response to a certain stimulus or combination of stimuli. At least in many cases, the observed phenomena constitute the normal reaction of that individual at that time to that stimulus; for example, a temperature of about 102 degrees Fahrenheit is a normal reaction on the part of an individual who is battling for his life against a horde of invading pneumococci. In biology (including medicine) the fundamental unit is the individual; since no two human beings are quite alike, either structurally or functionally, they differ, among other things, in their reactions to abnormal stimuli. Hence people exhibit biological differences both in their manifestations of disease and in their responses to treatment. For this reason clinical medicine must be the medicine of the individual.

MEDICINE AS AN APPLIED SCIENCE

As an applied science, medicine differs from other applied sciences in the nature of its material—human beings; herein, of course, lies its importance and its fascination. In this connection may I quote the following from the pen of Lord Moynihan: "To give courage to those who need it, to restore desire for life to those who have abandoned it, with our skill to heal disease or check its course—this is our great privilege. Ours are not the mild concerns of ordinary life. We, who like the Happy Warrior are 'doomed to go in company with Pain and Fear and Bloodshed,' have a higher mission than other men and it is for us to see that we are not unworthy."

This peculiar nature of the material with which we work places upon the medical profession almost unparalleled responsibilities. Think, for example, of the responsibility that is his whose patient may possibly be suffering from bubonic plague. Naturally, unusual powers and privileges are granted to the members of such a profession.

* Being the substance of some after-dinner remarks addressed to the Premedical Club of the University of California on September 15, 1931.

Some of these are picturesquely described by Rudyard Kipling: "If you fly a yellow flag over a center of population you can turn it into a desert. If you choose to fly a Red Cross flag over a desert you can turn it into a centre of population towards which, as I have seen, men will crawl on their hands and knees. You can forbid any ship to enter any port in the world. If you think it necessary to the success of any operation in which you are interested, you can stop a 20,000-ton liner with mails in mid-ocean till the operation is concluded. You can tie up the traffic of a port without warning given. You can order whole quarters of a city to be pulled down or burnt up; and you can trust to the armed co-operation of the nearest troops to see that your prescriptions are properly carried out."

THE ART OF MEDICINE

Perhaps the respect wherein medicine differs most from other applied sciences is that in medicine the application of science differs in each and every case, since, as we have seen, ailing mankind must be treated individually. Hence, whereas in most other applied sciences the working out of the application is itself largely a scientific procedure, in medicine the application of the physician's scientific knowledge to each individual case is often very largely an art—the *Ars Medici*. It is the importance of this artistic element in practical medicine that links it with all other forms of intellectual activity. Medicine is often thought of (for example, by premedical students) as somehow different from other pursuits; so it is, in its material and responsibilities, but not in its essential nature.

This fundamental oneness of medicine with other intellectual activities is attested to by the number of distinguished medical men who have achieved distinction in other fields of intellectual endeavor, of which I shall mention only literature and poetry. Let me cite one or two examples.

You are all familiar with the delightful writings of Oliver Wendell Holmes, but do you know that for some five and thirty years he was professor of anatomy at Harvard?

Some of you, at least, know the story of Sir Ronald Ross's brilliant demonstration that the organism of malaria passes part of its life history within the body of a mosquito and that consequently these insects are the agents whereby the disease is disseminated; and of his success in controlling malaria by eradicating the mosquito. The significance of this is thus indicated by Sir Arthur Shipley (referring to the hypopharynx of the insect): "It receives at its base the products of the salivary glands of the mosquito, and it is these products which contain the organisms which cause malaria—a disease which has probably caused more trouble and played a greater part in the history of the world than any other malady to which humanity is heir. Down this minute microscopic groove has flowed the fluid which has closed the continent of Africa for countless centuries to civilization, and which has played a dominating part in destroying the civilizations of ancient

Greece and of Rome." Ross's work aided greatly in making possible the construction of the Panama Canal. And the same intellect that could conceive and triumphantly consummate so magnificent an advance in medicine (both scientific and practical) could celebrate the victory in the following paean:

This day relenting God
Hath placed within my hand
A wond'rous thing, and God
Be praised. At His command

Seeking His secret deeds
With tears and toiling breath,
I find thy cunning seeds,
O million-murd'ring Death.

I know this little thing
A myriad men will save.
O Death, where is thy sting?
Thy victory, O Grave?

One other instance—John McCrea. It is your fortune to be of a generation to whom Flanders Fields are but a hearsay, and you know not the poem. John McCrea was a distinguished Montreal physician who laid down his life in Flanders Fields. Some of his poems are the speaking of a noble soul in anguish, for, like a true physician, he understood suffering. I wish to read to you four stanzas from his poem *The Unconquered Dead*.

* * * * *

That day of battle in the dusty heat
We lay and heard the bullets swish and sing
Like scythes amid the over-ripened wheat,
And we the harvest of their garnering.

* * * * *

We might have yielded, even we, but death
Came for our helper; like a sudden flood
The crashing darkness fell; our painful breath
We drew with gasps amid the choking blood.

The roar fell faint and farther off, and soon
Sank to a foolish humming in our ears,
Like crickets in the long, hot afternoon
Among the wheat fields of the olden years.

Before our eyes a boundless wall of red
Shot through by sudden streaks of jagged pain!
Then a slow-gathering darkness overhead
And rest came on us like a quiet rain.

* * * * *

My thesis, then, is that there is no essential difference between fine achievement in medicine and in any other field of intellectual endeavor. Hence, since medicine is but one phase of human achievement, it can be rightly regarded only by those who enjoy some appreciation of other expressions of the human intellect. Doubtless this idea was in the mind of the distinguished professor of anatomy who is said to have included in an examination paper in his subject this question: "What does Beethoven mean to you?" Perhaps, after all, that is no more absurd a test of a man's fitness for medicine than is his necromantic dexterity in identifying and "siding" an isolated carpal bone with his eyes shut.

You will observe that we started with medicine and we have ended with Beethoven. Do you see what I am driving at? Do you perceive that I am discussing premedical education? What do your

premedical studies mean to you? Merely the learning of a lot of facts classified as chemistry, zoölogy, and so forth, which you are vaguely given to understand would be technically useful to you in your medical studies if you could remember them? Just a scramble to secure the grades necessary for admission to the medical school? May I not trust that, in spite of their technicalities, your present studies are serving to introduce you to what has been—and is being—accomplished along various lines of intellectual endeavor, so that you may view medicine in its proper perspective in the sphere of human activities and appreciate the significance of artistry in all high human achievement, including medicine? Otherwise your premedical studies are missing the mark.

Possibly my remarks have disappointed you. You expected a professional talk, thrilling you with medical examples of the technical utility of learning physics, zoölogy, etc.—a sort of premedical pep rally with myself as cheer leader. And of course you fully expected to hear a great deal about anatomy, and what a *very* important subject it is. And instead of these really interesting things, you have courteously sat there and listened to poetry. You asked for bread and I may have given you a stone. Is there any hope of forgiveness?

Division of Anatomy, University of California Medical School.

PSITTACOSIS*

By GILES S. PORTER, M. D.
Los Angeles

TO meet the requests for information regarding the clinical symptoms of psittacosis, the following brief description is offered:

Etiology.—The etiologic agent, from the experimental evidence at hand, appears to be a filterable virus. The incubation period in man has been established as eight to fifteen days. Cases are on record on which it has been shorter and a few cases indicate that a longer period may occur, but in a very large majority of the cases recorded in the medical literature since the disease was first identified as psittacosis the incubation periods have ranged from eight to fifteen days.

SYMPTOMS

As a rule, the onset is sudden, differing in this respect from typhoid fever. The initial symptoms are usually chills, malaise, vomiting, and headache. In some cases there have been drowsiness and apathy in the early stages; in others there has been insomnia, excitement, or even delirium. Diarrhea is a frequent symptom in the initial stages; in some cases, however, there is constipation.

There are always pulmonary symptoms; the pulmonary focus forms gradually toward the end of the first week. The pneumonia is atypical.

Vesicular breathing is replaced by bronchial and that often by absolute silence, leading the physician sometimes to diagnose an effusion. This may be limited to one lung, but frequently the other lung will become similarly affected. Pulmonary symptoms continue until the temperature subsides and frequently longer. The consolidated patches then soften rapidly and completely dissolve, leaving no trace in the lung. The pulmonary symptoms do not seem to be the immediate cause of death, for dyspnea may be intense before they set in. A typical symptom is the almost complete absence of expectoration, even when the pulmonary symptoms are serious. The patient coughs, but often very slightly and is hardly ever distressed by it. When there is expectoration, the sputum is mucous or mucopurulent and sometimes rusty, but it is never blood-stained as in open pneumonia or the abundant mucopurulent sputum of bronchopneumonia. When examined bacteriologically, the sputum reveals the presence of non-specific microorganisms: staphylococci, streptococci, and pneumococci. However, infection has been produced in experimental animals through the inoculation of filtered and unfiltered sputum, indicating that the virus of psittacosis is in the sputum of individuals with lung involvement.

The cardiovascular symptoms are fairly constant. In spite of the high fever (103 to 104 degrees Fahrenheit) and severe pulmonary symptoms the pulse is never very rapid, usually fluctuating between 90 and 100. In some cases recorded, the pulse went as high as 120 or 130, but these cases proved fatal. The relative slowness of the pulse, accompanied by high temperature, is of assistance in diagnosing the disease, and although it is also a sign of typhoid fever it is of value in distinguishing psittacosis from pneumonia. The pulse is often dicrotic.

The digestive symptoms are not particularly marked and are not pathognomonic. The tongue becomes coated early; the center of the tongue may be chalky white and the edge red. Abdominal distention is common. Diarrhea is not a constant symptom and may be replaced by constipation. Vomiting may occur in the initial states, and intense thirst has often been observed.

The nervous symptoms are usually very marked. As stated above, drowsiness, apathy, and stupor may occur at the onset. Severe headache is another constant symptom, generally occipital although it may be frontal. The headache may persist through convalescence. The patient is always depressed and there is a tendency to collapse. Patients often complain of muscular weakness and occasionally stiffness of the neck.

The kidneys are often affected and albuminuria may be severe.

A leukopenia is usually found, but such is not pathognomonic, as leukocyte counts up to 26,000 have been observed. The differential diagnosis must take into account influenza, typhoid fever, and pneumonia.

Psittacosis patients are pale and weak. Perspiration is reported by some as a pronounced feature throughout the disease.

*From the California State Department of Public Health, by Giles S. Porter, M. D., Director of the Department.

As a rule, the symptoms begin to disappear about the tenth day, the temperature subsides and the pulmonary symptoms disappear, but in fatal cases the crisis may intervene about the fourth or fifth day of illness. The nervous symptoms predominate. There is a pronounced drowsiness, high fever, and marked prostration. The pulse becomes more rapid and death supervenes from cardiac weakness—sometimes even before the pulmonary symptoms have reached their maximum. In other cases death does not take place until the tenth or twelfth day of the illness, with symptoms of cardiac weakness and bronchopneumonia or from pulmonary edema. Uremia may be the cause of death. There is often a relapse just when the temperature is beginning to subside.

DIAGNOSIS

The disease cannot be accurately diagnosed unless all of the etiological conditions are ascertained and it is known whether the patient has been in contact with a sick parrot, parrakeet, or love bird. The diagnosis must be made by comparison with the symptoms of influenza, typhoid fever, lobar pneumonia, and bronchopneumonia. In influenza there is no stupor as in typhoid infection, the pulse is usually rapid and there is pronounced dyspnea and abundant expectoration. In typhoid infections, on the other hand (with the exception of typhoid pneumonia) the pulmonary symptoms are not so marked and are atypical as in psittacosis. The sudden onset distinguishes it from typhoid fever. Pneumonia and bronchopneumonia usually develop separately without being accompanied by a typhoid condition, and in acute lobar pneumonia the respiratory silence is not so typical as in psittacosis, which observation has led physicians to mistake psittacosis for an atypical form of pneumonia.

It must be admitted, however, that there exists no absolutely pathognomonic symptom of psittacosis and that in this disease, knowledge of the etiological conditions alone can assist the physician in his diagnosis.

SYMPTOMATOLOGY IN PARROTS

The *Report of the League of Nations* has issued the following statement regarding the disease in parrots:

"Psittacosis, or parrot disease, has for a very long time been known by bird dealers to exist among these birds. The period of incubation of the disease among parrots apparently varies from three days to several weeks. Usually the disease is ushered in by a kind of sleepiness, fatigue, and loss of appetite. The bird refuses all food, but is often tormented by thirst. Its feathers become ruffled, and rapidly moult. It remains motionless upon its perch, and is subject to fits of shivering. Severe diarrhea then sets in, with foul-smelling yellow or green stools, sometimes streaked with blood, and mixed with mucus. The bird looks weak and listless, and keeps its eyes closed. Its

feathers become dirtied with droppings. Death normally occurs after three or five days amid convulsions or paralysis. Few survive as long as the eighth or tenth day of the illness. If they do so, the disease takes an almost chronic form, and respiratory symptoms appear. The bird has difficulty in breathing, and snores. The dyspnea continues to increase, and there is sometimes abundant secretion from the nose and eyelids. The bird very quickly loses weight, and often ends by becoming blind.

"On postmortem examination, the first thing observed is the considerable loss of flesh, as has been well described by Bruno Heymann. The muscles appear striated; the abdominal organs are very congested; numerous ecchymoses are often found in the peritoneum. The spleen is enlarged and of a flaccid consistency, the kidneys also. The upper surface of the liver shows whitish-gray miliary nodules, which also occur in the parenchyma; the cardiac muscle is often dark red and hemorrhagic. A fibrinous fluid is sometimes found in the pleura. Finally, when the disease is prolonged, small foci of lobar pneumonia and hemorrhagiae often appear in the lungs."

PSYCHIATRY AND THE CRIMINAL*

By HERMAN M. ADLER, M. D.
Berkeley

DISCUSSION by Joseph Catton, M. D., San Francisco;
Thomas G. Inman, M. D., San Francisco.

IN order to avoid any possible misapprehension with regard to the title of this paper, let it be said at the outset that no attempt will be made to indicate that the criminal is insane, or even abnormal in the medical sense of the word. It may be unnecessary to give this assurance, and yet even the medical profession does not always escape the general tendency toward a partisan attitude concerning the relationship of psychiatry and criminology. It may, therefore, be just as well before proceeding with the subject to undertake to define at least approximately some of the concepts or terms which are essential to a discussion of either psychiatry or the criminal.

DEFINITIONS OF TERMS EMPLOYED

Psychiatry.—The term "psychiatry," when regarded strictly, means the "treatment of the mind." Psychiatry is, of course, definitely a medical specialty. The history of its development shows a dual and parallel progress. On the one hand, due to increasing understanding and improvement of the technique of neurology, there has been a gradually increasing knowledge of the nervous system and of organic lesions of the peripheral and central portions of the nervous system.

*Read before the Neuropsychiatry Section of the California Medical Association at the sixtieth annual session, San Francisco, April 27, 1931.

The other advance has been a purely practical one, quite apart from any special knowledge in the field, and was forced upon the profession by the necessity for creating special asylums and, later, hospitals for the insane.

This duality is still quite apparent, and sometimes leads to sharp demarcations between neurology and psychiatry. In the main, however, if the interest were confined entirely to the neurological aspects of this subject there would be little need for consideration of the sociological implications or even of criminology. We could afford to leave all of that to the jurist and to the psychologist.

Sociology.—Due, however, to the development of the state hospitals with their gradual return from isolation in the country to the vicinity of the centers of population; to the work of psychopathic hospitals; and, in more recent times, to the increasing activity of the psychopathologist, and especially the psychoanalyst, psychiatry has been brought not only into contact with the social problems of individuals and of the community, but it has been forced to assume definite responsibility in this field. This change, then, represents a shifting of emphasis from an original interest in disease alone to an interest in behavior. The psychiatrist has come to be concerned with what people do and why, rather than with an attempt to discover disease in particular localizations of the central nervous system. As a result of this the psychiatrist often appears to be actually more interested in the social than the purely medical problems of his patients.

This overlapping of psychiatry and sociology is not the only one, for while this change was going on in the psychiatric field, a parallel extension of interest was being manifested by psychology. It turned away from the older concepts of philosophy and came to occupy itself more and more with experimental undertakings, especially with those in the fields of psychopathology, animal behavior, and child study. This has led to the gradual breaking down of boundaries and to a fusing of interests, and even to an overlapping of functions in different branches of scientific enterprise.

MAIN INTERESTS OF PSYCHIATRY WHICH DISTINGUISH IT FROM SOCIOLOGY

Psychiatry, however, has retained from the very beginning two main interests which differentiate it from sociology. These are, first, its concern with the problems of *individuals*, and second, its concern with *abnormalities*. When psychiatry applies itself to criminology it does so because of its interest in the criminal. Instead, however, of confining itself to the search for abnormalities in the older medical sense, it now occupies itself more with deviations of behavior and motivations. Now it is impossible to deal with behavior and motivations of behavior with-

out extending one's inquiry beyond the immediate person of the individual studied. Behavior is an extension or a projection of the personality into the outer world. The success or failure of any single behavior sequence may or may not indicate recognizable abnormalities within the individual, but a succession of unsuccessful or dangerous or incongruous acts justifies at least an inquiry on the part of the psychiatrist or the psychopathologist. The psychiatrist, then, must widen his territory to include the major social relationships of his patients, and even to attempt an approximate evaluation of the social and other environmental factors concerned. It is inescapable, therefore, that psychiatry is concerned with social phenomena, because it is necessary to evaluate the social elements in each situation in order to understand the individual.

Study of the Individual.—In studying the individual there are only two ways of finding out what is going on in his mind. One is to consider what he says about himself, and the other is to see what he does. We must consider what he says, however, in the light of what he does. In order to evaluate what he does we must know the setting, the history, the rôle that others play in the particular affair, and many other social, environmental, and antecedent factors.

All of this goes to prove that there is no sharp boundary between psychiatry and the social sciences. They merge imperceptibly into one another. When psychiatry concerns itself primarily with organic disorders it may be regarded as primarily medical and not social. The differentiation between sociology, let us say, and psychiatry lies in the fact that the emphasis is placed on groups and social generalizations by the sociologist, whereas the psychiatrist, even when he is concerned with social phenomena, still adheres to the study of a given individual at any one time.

Concern With Abnormalities.—However, even with this analysis of the relationships and interests between psychiatry and sociology, one cannot make it clear what attitude we should take toward the criminal. Are we to continue to regard the criminal, on the one hand, as being definitely abnormal by constitution and heredity, as Lombroso would have had us do, or are we to assume the reverse, that he differs in no wise from the successful, law-abiding citizen? Furthermore, is it necessary to choose between these alternatives? It is possible that the future may some day give us a clear basis for the answer to the first question. At the present time all one can say is that all attempts to differentiate criminals from non-criminals on any other basis than a purely behavioristic one have been failures. Following the strict and legal definition of crime, it is, of course, extremely simple to make a distinction. A criminal is a person who has been convicted of a crime. A person who has not been convicted, whether

or not he has committed a crime, is not a criminal. Such an extreme statement shows the absurdity of the attempt. It is more in accord with present-day scientific thinking to ignore sharp distinctions and to adopt the functional or kinetic view of life. We are dealing with relationships, and not with definite, specific, clear-cut entities. We are dealing with problems having a preponderance on one side or the other of a complicated balance. We are dealing with an organism of great complexity of structure, and one in which all parts are connected and inextricably involved with each other; with one which is constantly changing due to stimuli without and within, due to shifting in balance here or there; with integration of body and mind, and of individual and environment. This stupendous mechanism, responding immediately, or with delay, by purpose, by accident, by impulse, by instinct, or by design, maintains its equilibrium more or less delicately, makes errors, quickly, slowly, or not at all. It sets in motion a chain of events which may react upon itself favorably or unfavorably, promptly, or at some future time. It fails to escape influences which may be advantageous or disadvantageous to itself. It may assert itself and assume the leadership of others, and lead them, by accident or by design, toward happiness or toward disaster. It may subordinate itself to the leadership of others or to an idea, which may result in one or the other of diverse experiences.

Without engaging in controversial discussion of such problems as free will or good and evil, it must be clear that the human being is constantly performing many acts of balancing; not only mechanical acts, such as walking, standing, running, but also acts such as the inhibiting of emotional responses in order to gain time to select more fitting ones.

It is the function of the psychiatrist to study these mechanisms in order to attempt to evaluate the fitness and accuracy of the responses. There are two criteria which are important in the psychiatric study of these phenomena. They are the *accuracy* of the response; that is, does the act fit the circumstances or the setting, and the *speed* with which the response is made. A response may be good in itself, but may be ill-timed. It may be too fast or too slow. Sometimes delay does not mean sober judgment and consideration, but inability to come to a decision. Sometimes speed of reaction indicates poor control.

I want now to mention the present-day attempt to study and explain the individual on the basis of his own peculiar circumstances of life. These circumstances include everything that can be regarded as having any important bearing upon the human being: so his heredity, his parentage, his economic status, his development, physical and mental and social, his memories, his likes and dislikes, his tastes and antipathies, his successes and failures, are all studied. In the light of these

findings an attempt is made to elucidate a given criminal act, to determine the possibility of the repetition of such an act, to ascertain the possibility of successful treatment, the amount of labor, time, and expense involved in reeducation, and finally to evaluate the expediency or practicality of making such an attempt.

This movement and this technique, which has many successes to its credit, and which has supplied much interesting and illuminating information about the development of personality, is one which cannot now, and perhaps never can be, adopted on a scale sufficiently large to deal with the problems of the community as a whole. One of the important contributions which this specialty has made to the subject of criminology is, nevertheless, that it has disclosed the possibility of working with subjective material and subjective factors.

SOCIOLOGY, PSYCHOLOGY, AND CRIMINOLOGY DEPENDENT ON STUDY OF SUBJECTIVE FACTS

Modern psychology has demonstrated the possibility of attacking a number of facts, which are none the less facts because they are associated with feelings. To say that one is hungry or thirsty is something which cannot be demonstrated objectively even though a very strong presumption may be reached. Sociology and psychology, and, of course, criminology, are dependent almost entirely upon the latter sort of facts.

A clear recognition of the necessity for accepting the subjective elements of analysis is extremely important if any progress is to be made in this direction in the field of criminology. It is also necessary that the members of the legal profession and the law-enforcing officials and the medical profession shall recognize that utilization of subjective elements does not mean that less clear thinking exists, or that there is less precision in definition or in the criteria upon which judgments are based than is the case in other departments of the biological sciences.

RÔLE OF PSYCHOPATHIC PERSONALITY IN CRIMINOLOGY

With this in mind it may be possible to clear up even that hazy field of the psychopathic personality which unquestionably plays such an important rôle in criminology. The fact that we are dealing with subjective elements does not justify us in playing an open-and-shut game with the concept of psychopathic personality. To say that a criminal is by nature callous, unfeeling, cruel, and vain is true or not true according to what one means by the term "by nature." In most instances the term "psychopathic personality" is reserved for those individuals who cannot be placed in the category of the insane or mentally deficient, and who yet persist in antisocial behavior. Such individuals are likely to prove exasperating to the psychiatrists, even as they are to their families and to the officers of the law. In fact, it is undoubtedly true that the term "psy-

chopathic personality" has often been applied to a person for no better reason than that the psychiatrist did not like him.

If one reserves the term "*psychopathic personality*" for individuals who exhibit behavior which indicates desires, the gratification of which are dangerous to themselves and to others, a group will have been created which includes the hardest nuts to crack which are presented to the police officials or to the psychiatrists. This is because we have eliminated those seriously disordered individuals whom we can recognize as psychotic or feeble-minded and for whom a very definite environment and treatment has been developed. We have also eliminated the neurotic. The *neurotic*, while actuated by conflicting motives and desires, is a menace, if at all, only to himself. He is eager at all times to talk about himself and his troubles, and he insists upon seeking the aid which he so definitely needs. These patients are loyal to the psychiatrist unto death. They do not antagonize him; on the contrary, they flatter the vanity of the psychiatrist whom they consult, even though they sometimes exhaust his patience.

Not so the *psychopath*, who does not recognize that there is anything wrong with him. The more serious his case and the more dangerous, the less he recognizes his need for help. He has contempt for anyone who would presume to regard him as abnormal and resists, sometimes violently, every effort to assist him and to protect the community against his dangerous propensities.

It is this type which presents the most serious problem, not only to the psychiatrist, but to the law-enforcing agencies of the community, and since the definition, although it may be precise, has to be applied on the basis of subjective evaluations, it is not a simple matter to devise suitable treatment.

It is unnecessary at this time and before such an audience as this to point to the diminishing importance in a criminological sense of the concepts of *mental deficiency* and of *psychosis*. Important as these two concepts are, they represent the same problem among the criminals that they do in society at large—no more, no less. Any appearance of unusual importance which they may possess in this field is the result of hope on the one hand, and on the other of the partisanship which so frequently accompanies any attempt to evaluate the various factors in a given career. So long as the determination of the mental condition of a criminal is made largely dependent upon the proceedings of the court, a partisan attitude can hardly be avoided. The defendant stands charged with a crime. Either he pleads guilty or he defends himself against the charge with the presentation of all the evidence that may aid his plea. If, therefore, his side introduces evidence as to peculiarities of mind or body, this evidence cannot be considered impersonally, as for instance, his body temperature might be considered. Such evidence will be used as an excuse on the one hand, and as a target for the opposition of the prosecution on the other.

This is not the only reason why it is perhaps incorrect to regard the criminal as a sick person.

If the idea of sickness is extended, it will include every deviation from top-notch, healthy functioning, and practically everyone will be included at one time or another. One must regard the criminal as, in the main, one who manifests disorders of personality and behavior which require somewhat different consideration from that accorded the patient in the hospital. Such logic has long been followed by teachers in the classroom.

RECOMMENDATIONS OF FIRST INTERNATIONAL CONGRESS ON MENTAL HYGIENE

So long as we are not allowed to consider the pathology or abnormality of the individual criminal except under the cross-fire of charges and defenses, it is hardly worth while to utilize the information which we possess. Unfortunately, in the field of criminology this partisanship extends even beyond the courtroom. After conviction the emphasis is placed upon punishment, and the public becomes, because of fear of the apparently increasing crime rate, more and more revengeful in its demands. Before we can give any serious consideration to whatever contribution psychiatry can make to the treatment of the criminal or to the prevention of crime, it is necessary to effect a change in the whole legal process. Realizing this fact committees representing the American Psychiatric Association, the American Bar Association and, more recently, the American Medical Association, have been working upon this problem. The most recent recommendations are those made by committees of the First International Congress on Mental Hygiene. In conclusion, it seems to me that I can do no better than to submit these recommendations for your consideration as the first step toward making possible a program of treatment, and possibly of prevention:

Recommendations of the Committee on Mental Hygiene Work in Prisons and Among Delinquents:

1. For the purposes of insuring justice and intelligent disposition of the offender, greater protection to society, and marked reduction of the objectionable features of partisan psychiatric expert testimony, a routine mental examination of accused persons should be made before trial. This should apply especially to juvenile offenders, and to adults charged with serious crime, with the ultimate objective in mind of applying this procedure to all accused persons, as soon as the machinery of the courts becomes adapted, and adequate psychiatric personnel can be secured.

2. Provision should be made at once to furnish to the courts the impartial psychiatric advice of some official body in such cases as the courts may desire it. The courts should be permitted and encouraged to commit to a mental hospital for observation any defendant who pleads insanity as a defense or in whose case there is doubt as to his sanity.

3. Convicts found to be psychotic while serving sentence should be at once removed from the penal institution to an appropriate hospital where adequate treatment and care may be obtained of a grade and standard as high as that accorded to civil mental patients. For the purposes of such adequate care, hospitals are deemed preferable to the so-called "insane wards" of prisons. The release of psychotic patients with criminal tendencies should be carefully safeguarded.

4. We urge the establishment of separate institutions, or departments for the care of mentally defective and psychopathic offenders, with provision for a truly indeterminate period of segregations, the release of such offenders being conditional and based

upon adequate medical, sociological, and psychiatric studies.

5. In addition to a mental examination before trial, we recommend the psychiatric study of all prisoners committed to penal and correctional institutions, an aid to their proper classification, occupation, discipline, and release.

6. We recommend that all juvenile offenders be dealt with by separate tribunals, the purpose of which shall be corrective rather than punitive; such tribunals to be equipped with adequate probation service. We also recommend that all such offenders be submitted to psychiatric study before final disposition of their cases be made.

Recommendations of Committee on Legal Measures and Laws:

1. Admission to a mental hospital for treatment should be made as informal and easy as the constitution and laws of the country will permit. To this end we further recommend that jury trials on the issue of insanity for commitment be abolished; that the presence in court of the patient to be committed be not required, but within the discretion of the judge; that the voluntary admission of patients who are seeking treatment and who are competent to make such applications be encouraged, and that those countries and states which do not have such laws be urged to adopt them. Laws also should be adopted as speedily as possible for the temporary care and study without formal commitment of patients upon the recommendation of a physician, as well as for provision for the commitment of patients for a period of observation.

2. We recommend that provision be made, wherever it does not now exist, for the release of patients on parole and supervision during a period of convalescence, such patients to be allowed to return to the hospital without further legal proceedings should their condition necessitate return. We recommend, further, that provision be established for the discharge of recovered patients without their needing to have recourse to legal proceedings for this purpose.

3. We recommend that provision be established along the lines of the Massachusetts (U. S. A.) procedure for the routine psychiatric examination before trial of persons charged with serious crime, and that such examination be made by an impartial body. We recommend, further, that in all instances where doubt arises in the mind of the court, provision be made for the examination by an impartial body of the prisoner's mental condition and, if necessary, for a period of observation in a mental hospital. We make these recommendations as a result of a conviction that only in some such manner can the confidence of the public in the defense of insanity be restored.

4. We recommend that the judges be given sufficient discretion to make disposition of prisoners in accordance with findings of abnormal mental conditions not sufficiently marked to constitute legal "insanity," and that means be provided, such as court psychopathic clinics and other means, whereby the court may be properly advised on these subjects.

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DISCUSSION

JOSEPH CATTON, M. D. (490 Post Street, San Francisco).—Doctor Adler has indicated the relations of psychiatry to sociology and the law. He has shown us definitely that the psychiatrist's job is only partly done when he deals with the patient as an individual. He has shown that the psychiatrist, having the qualifications for such service, must answer society's demand that psychiatry aid in the orderly running of the social body and in the administration of law and justice. He has gone over in theory, and has painted for us, the ideal status under which psychiatry might play these rôles. He has indicated the need for modified and new legislation to make these better conditions possible. He has stressed a very, very important attitude of mind toward the psychopathic individual, to wit, our studies and understanding of psychopathic

individuals charged with crime must not carry us to the point of placing a label on them of "mental sickness" and then advising and acting on the basis of such determination. On the theory that the criminal with psychopathy is an ill man, we would reach into our penal institutions and begin to excuse, and to coddle, and to treat those persons, placing them in the same status as the frank psychotic and mentally defective individuals. Such an attitude would make it entirely impossible to have a well-ordered society.

These considerations drive me into a position somewhat different from that assumed by Doctor Adler. I believe that society's philosophy must necessarily be somewhat pragmatic, even if it appear not entirely sound, viewed through the eyes of medicine and psychiatry. If we travel the whole psychiatric route in our approach to these problems, we may find ourselves bothered as to whether there is any such thing as personal responsibility. Yet the whole structure of the law is developed on just that basis. If we follow the psychiatric route toward many a medico-legal problem, whether the problem be in relation to a criminal or be entirely a civil matter, we will find that psychiatry in its present stage of development is able to offer much, but *not enough* to make final determination in these matters. If a crime has been committed, a court or jury must decide the question of responsibility; if a will be written a court must decide its validity. If a person is alleged incompetent a court must make a decision. In each of these situations the court's decision must be definite and prompt if society's machinery is to be kept running. My point is this: we know that there are defects in human nature and human behavior, expressing themselves not only in society in general but in medicine and the law as well, and until such time as medicine, psychiatry, and sociology have become so perfect that the facts will indicate promptly and with finality that this person is responsible for his acts; that that person's will is valid, etc., the law must set up certain rules by which decisions may be promptly made and society allowed to go about its other business. Psychiatry must recognize its capacities to serve the law and must continue to insist that methods be worked out for the proper presentation of its case before the law. Psychiatry, however, must recognize its limitations: it is but one facet of the diamond of society, a jewel as yet most crudely cut. Psychiatry must recognize that it cannot take over the work of the law and that it will find its eventual place in the social structure much more quickly if it will confess frankly its limitations at the same time that it makes its demonstrations and assertions of capacities.

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THOMAS G. INMAN, M. D. (2000 Van Ness Avenue, San Francisco).—It is refreshing to have a psychiatrist of Doctor Adler's sound training and wide experience speak of the "diminishing importance in a criminological sense of the concepts of mental deficiency and psychosis." The idea that crime and insanity are in some subtle way connected one with the other has become too widespread with both the profession and society in general. The facts do not warrant such belief. An individual suffering from a psychosis sometimes does commit an antisocial act—injuring others and himself—but the act is no more to be considered a criminal one than is that of the delirious patient who strikes down his nurse with a water pitcher.

The only function of the psychiatrist in the courts, in the interest of the possible criminal, is to determine whether or not the accused was at the time of the commission of the crime the victim of a psychosis. Expert testimony in the case should be given solely on the medical facts and should not deviate therefrom because of interest in either side.

It is for the purpose of getting this detached, unbiased medical opinion that suggestions for the selection of experts have been formulated by interested groups. The feeling against the present system will, not unlikely, cause some change to be made. Biased

testimony has caused mental derangement too often to be read into the verdict. Society must some day use the knowledge acquired in psychiatric research in the same manner it now uses the knowledge of the engineer and economist for its protection and improvement.

Unfortunately, however, application of medical knowledge to social use is, in this period of our civilization, seriously interfered with by those devotees of eccentric thinking who form pseudoreligious healing cults. These peculiar individuals find their way into social uplift groups, jury panels, and even the judiciary itself. With their antimedical slant, it is almost impossible to obtain a verdict in accordance with the medical facts in any legal case where they act as jurors. Embodied in a group of individuals possessed of some education and with a certain economic strength, this sinister influence is more inimical to the development of a sound social system than all of our defectives, criminal or otherwise.

While social conditions have a definite bearing upon the development of mental disturbance, the real cause lies within the patient himself; and the psychiatrist, in his consideration of these external influences, must not be diverted from the study of the patient and his disease. The duty of the physician is to adjust the patient, insofar as that is possible, to his environment and not attempt to reorganize the environment to suit the patient. Social conditions are formed in ways not always clear to contemporary observers, and attempts to shape the course of social evolution by artificial means may be attended by disastrous results.

LEISURE AND ETHICS*

By J. B. DE C. M. SAUNDERS, M. B., F. R. C. S.
San Francisco

IT is in all humility that I address you on this subject. I shall attempt to indicate what I feel is the spirit which should guide us in our conduct, in our ethics, and how this spirit may best be gleaned by the right appreciation of art and of nature.

It is with humility I speak as a fellow traveler who is still struggling along the pathway of experience, who has not traveled far, but who has just begun to see the light dimly shining through the veil of this mysterious life. I would call a halt and ask you to consider the spiritual side of life and work. I make no apology for dwelling on this aspect. As Robert Bridges says of Francis of Assisi: "His following in life and his fame thereafter confute the lower school of Ethick, which would teach that spiritual ideas are but dream-stuff in men."

We who have youth seem to ourselves immortal. "Life is indeed a strange gift and its privileges are most miraculous. Nor is it singular that when the splendid boon is first granted us, our gratitude, our admiration, and our delight should prevent us from reflecting on our nothingness, or from thinking it will ever be recalled. . . . Like a clown at a fair, we are full of amazement and rapture, and have no thoughts of going home, or that it will soon be night."

We cannot inculcate the highest traditions of our profession by work alone. "Moral respon-

sibility—Am I my brother's keeper?"—is the root and spring of purified humanity. This sublime postulate needs no apology, and we shall find neither the desire nor the strength for our task except by a full and frank recognition of that spiritual factor which Meredith so beautifully indicates in the lines:

"Our life is but a little holding, lent
To do a mighty labour, we are one
With heaven and the stars, when it is spent
To serve God's aim."

Life is but a combination of leisure and of work. Our conduct in our work is summarized for us in the Hippocratic Oath. Conduct is based upon character, and our character is affected more by the use of our leisure hours than by those spent at work. Into those leisure hours we must weave our interpretation of life, its mystery and its beauty, until it becomes the very fabric of our being. We may consider these leisure hours as an outlet from the more confining path of professional activity. I would suggest that in art and in nature you will find this outlet toward the better and fuller appreciation of life and the true tradition of our noble profession.

It is not in all of us to appreciate certain forms of art, but in at least one of its branches, whether it be literature, music or painting, we can find pleasure and inspiration, which in turn, almost unknowingly, will influence our ethical bearing and our outlook on our fellow men. Channing, in his "Essay on Milton," says of poets: "They carry the mind beyond and above the beaten, dusty, weary walks of ordinary life, lift it into a finer element and breathe into it a more profound and generous emotion." *Art is but the expression of man's joy in his work.* Let his joy imbue us with enthusiasm to acquire some familiarity with one of art's manifestations. Thus will we in great measure avert any narrowing influence in our increasingly concentrated and more specialized work.

Of the realm of nature there is but little that I can say. I should like to quote Dawson, one of our Edinburgh teachers, pathologist and philosopher. "Nature is a realm in which we must live alone, for no spirit can guide another spirit into her manifold mysteries and unceasing wonders. The voices that speak in sea and sky, in river and forest, in the majesty of the mountains and the dreamland of the plains, in flower and grass, are alike within the dominion of the soul. As we grow up and roam alone and the voices of nature speak to us, we learn something of the inner meaning and mystery of all that surrounds us; we come to recognize beauty where we had seen only color, to realize life where we had seen only form."

Thus we fill our leisure hours with beauty—garnered both from nature and from art and we come to reverence it, not for its sake alone, but for the hidden things that lie behind all loveliness—a reverence for all that is best in the world—whether in the beauty of earth, sea or sky, in the realm of art, or on the highroad of life where men struggle and suffer. Thus is our understanding deepened and we are the better

* From the Department of Anatomy, University of California Medical School.

* Presented before the 1931 senior class, University of California Medical School, on the occasion of the annual presentation of copies of the Oath of Hippocrates by Professor William J. Kerr, M. D.

fitted for the work of our choice. To carry on this work according to the highest ideals and ethical principles must be our aim. Without the spiritual side there can be no ethics, and medicine without ethics is unworthy of the name.

THE LURE OF MEDICAL HISTORY

ESSAYS ON THE HISTORY OF EMBRYOLOGY*

By A. W. MEYER, M. D.
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IV

SHORTLY before Malpighi's observations on the development of the chick were published, an epoch-making observation had been made by a Dutch microscopist, Antoni Leeuwenhoek. This man, who was called an "immortal dilettante" by Professor Becking, a young countryman of his, is usually given credit for the discovery of the spermatozoon. Although Leeuwenhoek may have been a dilettante, he nevertheless made many important discoveries with microscopes made by himself, but which were far superior to any others of the time and were made by the hundred, according to Stein.

THE SPERMATOZOON

It is regrettable that Leeuwenhoek's imagination, like Swammerdam's and Harvey's, led him sadly astray. It seems he reported to the Royal Society, to which he had sent so much that was startling and what commissions could not confirm because they had inferior microscopes, that he was able to identify male and female spermatozoa by inspection alone!

Spermatozoa were first seen in 1675 by Hamm, a student of Leeuwenhoek, who is otherwise unknown, in the semen of a man "who had cohabited with an unhealthy woman." It is to the credit of Leeuwenhoek that he quickly apprehended the significance of this discovery, and surmised that the moving, motile bodies which he called seminal filaments really were the male germs of animals. He looked for and found them in the testes of the dog and the rabbit, of birds, frogs, fish, and insects, and also in the tubes and uteri of dogs and rabbits. As Singer emphasized in "A Short History of Medicine," this was a very deserving and important accomplishment in embryology, and he did other things, as Stein and others showed so well. Leeuwenhoek also estimated the total number of spermatozoa in the gonads of some animals and stated that those of codfish contained more than ten times as many sperm as there were inhabitants on the earth at that time. Since there are over a hundred million spermatozoa in a single cubic centimeter of semen of some mammals, and since he thought that the population of the earth might be over thirteen

* This is the fourth paper of a series of essays on this subject. Previous papers were printed in this journal as follows: Part I in December California and Western Medicine, page 447; Part II in January California and Western Medicine, page 40; Part III in February California and Western Medicine, page 105.



Figure 3.

billions, it is evident that Leeuwenhoek approximated the truth fairly well.

Animalcules had long been known to occur in printer's ink, vinegar, and also in putrefying substances, hence it is easy to understand that the presence of similar organisms in human semen not only aroused skepticism and evoked surprise, but also caused disgust. Cole quotes Andry as saying in 1701 that, "If, after you have taken off one testicle [from a dog] and by the aid of the Microscope examined the Humour that comes out of the deferent vessels, you shall discover in it such a hideous number of little worms that you shall hardly be able to believe your own Eyes." But the indispensability of spermatozoa in procreation was not established experimentally until 1780, a century later, when Spallanzani performed the first experimental fertilization in toads, water salamanders and frogs, and proved that filtration of the semen destroys its fertilizing power and that an aura spermatica does not exist.

Whether Hartsoeker, who represented a flexed homunculus in the head of a spermatozoon, or Plantade, who signed himself Dalenpatius, and similarly represented a miniature human being in the extended posture, are to be taken seriously remains a question. Hartsoeker seems to have been known as unreliable and Plantade as a joker. Hartsoeker also stated that the tail of the spermatozoon becomes attached to the uterus and forms the umbilical cord. This idea may well have come

from Ruysch, who among others noticed macerated deformed embryos in early human abortuses. Since some of these had a form roughly suggestive of spermatozoa, as the illustrations after Ruysch in the accompanying figure will show, he and others were misled by it. The embryologists of those days were unfamiliar with the bizarre shapes that embryos may take because of abnormal development or in consequence of maceration changes under sterile conditions in utero after the death of the embryo. Hence it is not surprising that they misinterpreted such forms as represented in the accompanying illustration after Ruysch.

Ledermuller says that Ruysch discovered the spermatie animalcule—*Samenwurm*—in several conceptuses between 1710-1720 and also refers to Leiberkuhn, who found the "spermatie worm" in a human abortus the size of a pea. This abortus is reported to have contained a corpuscle in which three parts could be recognized. Two of these contained blood and the third was composed of a long tail, the whole having been surrounded by a thin membrane, apparently the amnion. Lieberkuhn took the two red portions to be the ventricles of the heart and the third portion the spinal column which ended in the tail which was taken to form the umbilical cord. Since the early belly stalk of man, which constitutes the early umbilical cord, lies in close proximity to the caudal extremity of the embryo, one need not be surprised at this mistake.

GRAAFIAN FOLLICLES

Ten years after the discovery of spermatozoa, attention was directed by Steno, J. van Horne, and Regnier de Graaf to small vesicles so common in the periphery of human ovaries, or testes muliebres, as they were then still called. They could not fail to attract attention, and these investigators concluded that they were ova. Steno, hence, suggested the name "*ovarium*." It is interesting that the designation "*testes muliebres*" was still in use, as the legend accompanying the illustration from de Graaf* shows, and that the latter contains a representation (E) of an isolated follicle as though they were extruded or could be shelled out. The relatively large vesicles seen by Steno, van Horne, and de Graaf in mammalian ovaries are known to this day as Graafian follicles, although the term "vesicular ovarian follicles" has been given them in the Basle terminology. De Graaf further observed the ovaries of rabbits after copulation and described some changes which occur in them.

Since Graafian follicles are many, many times as large as ova, de Graaf was greatly puzzled by finding much smaller, roughly similar vesicular bodies in the uterine tubes of the rabbit seventy-two hours after coitus. He tried to reconcile these contradictory observations by suggesting that the reduction in size of the alleged ova in the ovary, that is, of the Graafian follicles, was due to the presence of something in the latter which is used up in the formation of the corpus luteum. Before the mammalian ovum was finally identified, those

* This illustration appeared with the preceding installment.

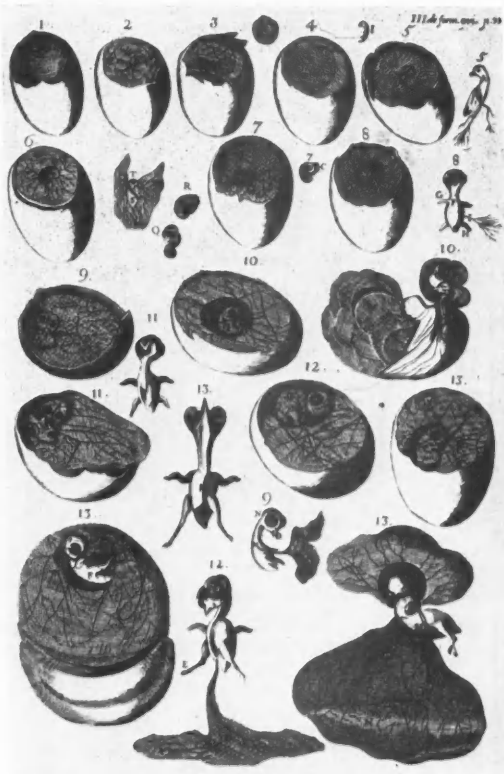


Fig. 4.—Plate 3 from Fabricius, illustrating the development of the chick.

who opposed the idea that the female testis was in fact an ovary, as the older anatomists had thought, could and did bring forward unanswerable arguments against the idea that the Graafian follicles were ova.

At this time the word "*ovum*," as applied in mammals, still was being used in the sense of conceptus. Aristotle had defined an ovum as a body from one part of which a future individual is formed by feeding upon the other part. However, Aristotle further spoke of "animals which engender internally" as having "a certain oviform body produced after the first conception." It was in this sense that Harvey used the word when he wrote that he often saw ova the size of pigeon's eggs containing no fetus, discharged by women about the second month after conception, and that when the ovum was the size of a pheasant or hen egg the embryo could be made out "the size of the little fingernail floating within it."

THE THEORY OF PREFORMATION OR PREEXISTENCE

Although the investigations on the development of plants and insects by Redi and on animalcules by Spallanzani had thrown much doubt on the idea of equivocal or spontaneous generation, the observations of Swammerdam on insects, recorded in "*Die Bibel der Natur*," seem to have greatly strengthened the foundation of the old theory of preformation or preexistence. The latter term



LONDINI,
Apud Octavianum Pulleyn 1653.

Fig. 5.—Frontispiece, Harvey's first edition (after Malloch).*

* Author includes this and the succeeding frontispiece from Harvey because they are supposed to come from a first edition. It is usually stated, however, that only one first edition appeared in London and three in Amsterdam during the same year. The phrase *ex ovo omnia* is found on the egg-shell in both. It is unknown who introduced these illustrations, but it is not improbable that it was the printer.

was first used by Sir Kenelm Digby in 1644, according to Cole. The skillful dissections of Swammerdam and the brilliant experiments of Spallanzani did much indeed to revive Haller's dictum, "There is no such thing as becoming. No part of the animal body is formed before another. All were created at the same time." This preformation idea was also called the theory of evolution, but according to it organisms were not thought of as slowly unfolding or evolving, but merely as increasing in size from a microscopic miniature to the adult. However, not everyone held exactly the same views regarding preexistence.

To what extent and in what manner the individual was preformed and how the myriads of preformed individuals were arranged in the sperm or ovum evoked much speculation. One of the oldest ideas was that of emboitment or box within a box, or Einschattelung of the Germans. According to Wheeler this was announced by St. Augustine. The Swiss naturalist Bonnet developed and

espoused it especially and regarded it as "one of the greatest triumphs of the human mind over the senses." It met its greatest difficulty in explaining abnormalities and variations and inheritance from both parents, as did all preformation theories. Bonnet, who at one time believed in emboitment ad infinitum, later declared:

"I am glad that you have distinctly seen the circulation of the blood in tadpoles, before they yet shewed any signs of motion. Many other intestine movements doubtless take place in germs, before they are sufficiently developed to move their little limbs. If germs are all originally enclosed one within another, many intestine motions must have happened in them since the creation. But this admirable spectacle is reserved for those superior intelligences, whose piercing view penetrates into the most hidden springs of the machine of this world. Much has been said of the involution (emboitement) of germs; the term is improper: germs are not little boxes enclosed one within another; they must have been integrant parts of the first organized bodies that came from the hand of the Creator. I have insisted on this point in one of my new notes on the *Contemplation*. It is of consequence to fix the meaning of terms precisely."

It has been asserted that the modern embryologist is a preformationist and also that he believes in spontaneous generation. Wheeler, for example, asserted that "An exaggeration of epigenesis is spontaneous generation," and Whitman declared: "Both preformation and postformation, as now understood, enter into every theory of development." But epigenesis implies spontaneous generation only if each organism is assumed to arise *de novo* from unorganized material or if the origin of the first organism is considered and the modern embryologist believes in predetermination or predestination and not in preformation. No part of the future individual is regarded as preformed in the zygote though not all its parts are equipotential.

According to Gilis the theory of preformation also won support through a Venetian physician, Joseph of Aromatari, who was enthused over the revelations of the microscope, and while examining seeds was impressed by the resemblances of the germ and cotyledons to a plant and hence announced, in 1625, that all plants were contained in miniature within the seed. Blumenbach also refers to Aromatari and so does Cole.

From painstaking and really very skilled dissections of the larvae and pupae of flies and of butterflies, Swammerdam also was led to conclude that all the parts of these adult animals are contained in miniature in the immature forms. His skill in dissection and representation was unsurpassed, but he allowed his imagination to carry him so far that, according to Boerhaave, he actually demonstrated all parts of the butterfly in the body of a caterpillar at a meeting of scientists. Surely there must have been some doubting Thomases present! Swammerdam apparently was misled by what he saw in the pupal stage, and from the presence of all parts concluded that all organs also exist in the larva and the ovum. This seemed only a small and logical step from his observations upon dissections and this Swammerdam took. He wrongly opposed the idea of metamorphosis, as illustrated in the development of the

butterfly which he studied, but it seems that he was the first to represent developing frog eggs showing cleavage.

Although Swammerdam had observed and represented cleavage in the frog egg and had established the occurrence of external fertilization in the frog, thus disproving the statement of Linnaeus that impregnation can occur only in the living body of the female, he thought that bees were fertilized by a "vivifying aura exhaling from the body of the male and absorbed by the female," and that fishes were fertilized by mouth. He may have come to this conclusion because fishes had not been seen to copulate and because the female occasionally was seen to swallow sperm.

According to Spallanzani, "Reaumur has been led by deceitful appearances to suppose that these insects [bees] perpetuate their kind by real copulation" and he added that the idea of the "celebrated Maraldi" that they are impregnated by a whitish matter voided by the male after the eggs are laid, is completely verified! He also says that Haller thought fishes copulate and that Vallisneri, a Venetian physician, who could not find an ovum in the Graafian follicle, thought that pigeons and sparrows and many other animals were fecundated by mouth and that the function of the spermatozoa was to keep the semen fluid by their motion.

Malpighi also espoused the preformation theory because he found the first rudiments of the embryo in unincubated hen eggs and thought he found them in pupae. He could not be expected to know that fertilized hen eggs are in the gastrula stage of development when laid or that in the warm climate at Bologna, 35 degrees centigrade, this development could continue for a little while, without other means.

SPALLANZANI AS A SUPPORTER OF PREFORMATION THEORY

But the most important supporter of preformation or evolution was the great experimental embryologist, the Abbé Spallanzani, professor of natural history at the University of Pavia, superintendent of the public museum, and fellow of various learned societies. It is impossible to convey an adequate idea of his many experiments on generation in a few paragraphs, but it is illuminating, as well as regrettable, that so assiduous an experimenter should have thought that he brought experimental proof for such a wrong theory. Spallanzani says he announced his discovery of the preexistence of the germ in a species of frog, in his *Prospectus* concerning animal reproduction, published in 1768. In the introduction to his dissertations relating to the "Natural History of Animals and Vegetables," he wrote:

"Having examined other animals, and having found that the same thing is true with respect to them, I have still stronger reason for presuming that the existence of the germ in the female before fecundation is one of the most general laws of nature. . . . I have been led by observations, which show the preexistence of the germ, to discover that an order of animals, considered by naturalists as oviparous, is in reality viviparous."

The learned Abbé also concluded that his experiments on plants, likewise, supported the theory of preformation which he now regarded as a law, as did Bonnet, who said:

"I, you know, have never doubted of this preexistence: all my reflections upon generation, even in my youth, led me to consider it as the most universal law of Nature."

It is significant that the renowned Abbé regarded it as important that an investigator possess truly "philosophical views," and it is very clear from his own work that the possession of such views on his part led him beyond the evidence in spite of the fact that he quoted the following words from a note received from Haller with warm approval. The date of this note was November 5, 1777, and Haller wrote: "*Il est toujours temeraire d'attaquer des experiences par des raisonnemens.*" (It is always rash to attack experiments by arguments.)

Spallanzani based his belief in preformation or evolution or preexistence upon experiments with the eggs of various kinds of frogs, toads, and newts. He could find no difference in appearance between the unfertilized and the fertilized eggs; they were not covered by a shell or skin, as were those of other oviparous animals, and he probably leaned upon the philosophical deduction that matter is indefinitely divisible. He not only believed that the embryo preexisted in the ovum, but that the amnion and umbilical cord also did so even before fertilization, and insisted that ova, hence, were not such, but fetuses. He held that tadpoles of frogs and toads were likewise contained in the ova before fertilization while still in the ovary, saying:

"We are not able to distinguish any before the second year, when two sets appear, viz., the mature ones, those which are to be brought forth that year, and the immature ones, which will be produced the succeeding year. That year the third succession of fetuses becomes visible, and the fourth year the fourth succession; and in this manner one succession only every year."

He carefully examined ova during their increase in size, and wrote:

"During the evolution, I analyzed these corpuscles with the utmost care, and compared them both internally and externally with others in the uterus and oviducts, but could perceive no difference except in size. From this identity, then, it may be concluded that as these corpuscles are real tadpoles when they are without the body of the female, they are so also within it, and by consequence, that the fetus exists in the female before the concurrence of the male. . . . Although the evolution of these fetuses was never so considerable and quick, as after fecundation, it is, however, perceptible before."

That this great investigator was misled by his imagination is clear from the following quotations which also indicate how ardent a supporter of preexistence he was.

"By tracing thus the progress of evolution, we come to perceive that these bodies are not eggs, as Naturalists suppose, but real tadpoles. The furrow and the processes become longer; the supposed egg assumes a pointed figure; the whitish hemisphere dilates, and the black is incurvated. The pointed part appears to be the tail of the tadpole, and the other the body. Further, the opposite end takes on the

appearance of the head, in the fore part of which the form of the eyes is visible, though they are yet closed. The two processes also, by which the animal fattens himself to the smoothest bodies, when it is tired of swimming, become evident, as likewise the vestige of the aperture of the mouth, and the rudiments of the gills. . . . It follows, that these species ought to be removed from the class of oviparous animals, to which they have been referred by naturalists and nomenclators, and placed among the viviparous. There is a circumstance here that deserves to be noticed. All viviparous animals have this in common, that their fetuses are at birth full formed, and retain the lineaments which they then have through their whole life; they are only more unfolded. We are further certain, that they have long before birth the form of the species, as is evident from human abortions, as well as those of beasts. In like manner, animals that come from eggs are formed, not only when they are hatched, but long before, as we see in the eggs of birds, various reptiles, crocodiles, &c. If the eggs are broken and examined, we perceive the fetuses more or less advanced, provided they have been fecundated and set to hatch. I have made the same observation on the eggs of insects; when I found they were nearly hatched. I have frequently opened the pellicle, and discovered the embryo formed, and endowed with the power of motion. On the contrary, the fetuses of the amphibious animals, that have been the subject of my researches, are quite shapeless at the time of exclusion, and have only the appearance of globules; it is not till afterwards that the limbs begin to appear, and that they assume the lineaments of the species. Now I think that upon reflection, I can assign the physical cause of this striking difference. The fetuses of other animals have, indeed, at the time of birth, the characteristic form of the species, but they do not acquire it for some time after fecundation. They are at first shapeless, as we see in birds in the egg, which, before they assume their true figure, must undergo the most surprising changes, as has been shewn by Haller, and before him by Malpighi."

That Spallanzani nevertheless proceeded with the greatest care is shown by the following quotation:

"The reader will probably be surprized at this description, since it appears, that the tadpole does not come out of the egg, but that the egg is transmuted into a tadpole; or, to speak more philosophically, that the egg is nothing but the tadpole wrapped up and concentrated, being evolved in consequence of fecundation, and assuming the lineaments of an animal. These phenomena were new and unexpected, for I was firmly persuaded, that the globules of two colours, surrounded by mucus, were real eggs; all who have written concerning the generation of frogs, as Jacobus, Valisneri, and Roefel, having so denominated them. But as greater deference was due to what nature shewed so plainly, than to the authority of the most celebrated writers, it is fit to call these globules tadpoles or fetuses instead of eggs; for it is improper to name any body an egg, which, however closely it may resemble one, takes the shape of an animal without leaving any shell, as is the case with all animals that come from an egg. . . . I can also assure him, that every fact has been seen and examined a great number of times, for I have been taught by daily experience, that in natural history, truth can only be attained by the constant success of repeated experiments. . . . We cannot therefore on this, any more than on numberless other occasions, lay down any general rule, but must be attentive to the variation of Nature, in the endless multiplicity of her operations. . . .

"But let us proceed to the hatching, or rather the evolution of the newts, another part of their history not less curious and interesting than the preceding. Let us then attend to what happens to the eggs after they have been brought forth. These, when put into water, sink to the bottom; if the weather be warm, a quantity of air-bubbles soon appears upon the gluten

which includes them; these at first are very small, but become afterwards larger, and at last so large, that the eggs become lighter than water, and arise to the surface, bringing with them the collection of bubbles still adhering to the gluten: the bubbles then burst and disappear, and now the ova fall again to the bottom, and rise no more, being kept down by the gluten, which fastens them to the spot on which they rest. If we continue to watch them attentively, we perceive that their shape begins to change. When first brought forth, and for one or two days afterwards, they resemble an elongated spherule now begins to appear slightly curved, representing in miniature a kidney, or the testicle of a cock. The curvature increases, and the bulk in the same proportion, but with this additional circumstance, that one end of the ovum becomes thicker, and the other thinner. In the mean time, it acquires twice its original size. And now it appears not to grow in bulk, but only in length; and this becomes every day more apparent to the surprise of the observer. But his greatest surprise arises from seeing the egg thus elongated, agitate itself at intervals with great briskness, and then continue quiet: and as this happens without any external exciting cause, the idea of animality necessarily arises in the mind, and we incline to believe that the supposed egg is a real newt, only in disguise, just as I have discovered that the supposed eggs of frogs and toads are not eggs, but tadpoles in disguise. This idea continues to be more and more confirmed in the sequel, from observing by a glass the self-moving egg assume the features of a small newt, the tail appearing perfectly formed, the vertebrae beginning to shew themselves as well as the little gills within which the blood circulates, and likewise two lateral protuberances, which the observer suspects to be the rudiments of the arms, and the vestiges of the head and muzzle, and lastly the outlines of the eyes lying by the side of the head, under the appearance of two inconsiderable tumors. . . .

"There still remains an important inquiry relative to these animals, the same which has been already made concerning frogs and toads. At what period may those roundish bodies, commonly called the eggs of newts, be properly termed true fetuses?"

(To be continued)

CLINICAL NOTES AND CASE REPORTS

CONGENITAL ATRESIA OF THE ESOPHAGUS*

REPORT OF CASES

By RALPH S. GRAHAM, M. D.
Sacramento

CONGENITAL malformation of the esophagus is a condition so rare that most of the standard works on anatomy, embryology, pathology, and pediatrics, as well as the systems of medicine and surgery, dismiss the subject with the mere mention that it has been known to occur.

Reynolds and Morrison¹ found but one case in the large necropsy service at Bellevue Hospital in sixteen years. Stukowsky and Boran² found but one in fifty thousand hospital cases. Although the first case was recorded as early as 1670 by Durston³ only 204 cases were found by Plass⁴ in 1917, and a review of the literature since that

* From the department of roentgenology, Sutter Hospital, Sacramento.

¹ Read before the Radiology Section of the California Medical Association at the sixtieth annual session, San Francisco, April 27-30, 1931.

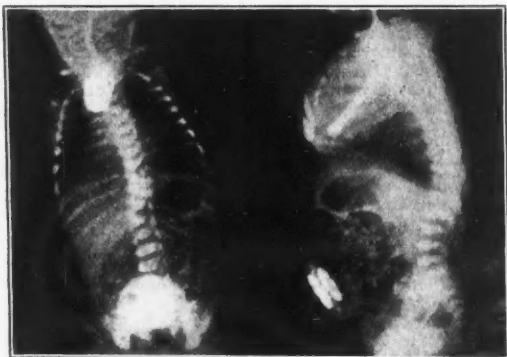


Fig. 1.—Roentgenograms of Case 1, showing the lipiodol-filled cul-de-sac of the upper esophagus. Note the rounded lower border of the sac, the gas in the stomach and bowel, and anomaly of the lower dorsal vertebrae.

date brings the total to but 233 recorded cases. The two cases presented here were both delivered on the obstetrical service at Sutter Hospital within a period of three months by Dr. H. F. Schluter.

REPORT OF CASES

CASE 1.—A male baby, weighing six pounds eleven ounces, was born of healthy parents on July 16, 1930, at term. The mother was a primipara, twenty-seven years of age, and delivery was normal. The maternal grandfather had two rows of upper front teeth, but there were no other anomalies in the family on either side. The baby had a large amount of mucus in the throat, but breathed spontaneously. Mucus collected repeatedly in the throat and all feedings were regurgitated at once and associated with increased cyanosis. Meconium was passed and urine voided normally.

Physical Examination.—Dr. E. S. Babcock's examination reported a "small, pale baby, normally active, head and fontanelle normal, eyes normal. Right nostril does not admit a No. 12 F. catheter. Mouth, throat, and neck normal. Heart normal. Lungs do not expand well. Abdomen normal, spleen and liver not palpable. Double thumb on right hand, extremities, and spine otherwise normal. The stomach tube meets obstruction, probably in the region of the cardia. No fluid can be injected, and there is considerable mucus. There is probably atresia or obstruction in the cardiac end of the esophagus."

X-Ray Examination.—This was made on July 18, 1930. Under fluoroscopic observation a small catheter was inserted through the left side of the nose, and at first entered the trachea and right bronchus. On second attempt the catheter entered the esophagus, descended to about the level of the third rib anteriorly and then turned and coiled up and could not be passed further. Lipiodol to the amount of five cubic centimeters was introduced and filled out a sac-like structure. The baby was held upright for several minutes without change in the appearance of the esophagus shadow. An additional five cubic centimeters of oil was then injected, part of which was regurgitated at once. Films (Fig. 1) show a pouch about 5x2x2 centimeters, its lower border smooth and rounded in contour. A diagnosis of congenital atresia of the esophagus was made. Films also show a gas bubble in the stomach and gas in the intestine. The eighth, ninth, tenth, and eleventh dorsal vertebrae are incompletely fused, and from their distorted positions the ossification centers appear to be going to unite obliquely rather than straight across.

Esophagoscopy.—Examination on July 18, 1930, by Dr. George A. Briggs. Some lipiodol was still in the esophagus eight hours after the x-ray examination. The esophagoscope was passed into a smooth pouch in which no opening could be found. The rounded lower end of the pouch was located about halfway

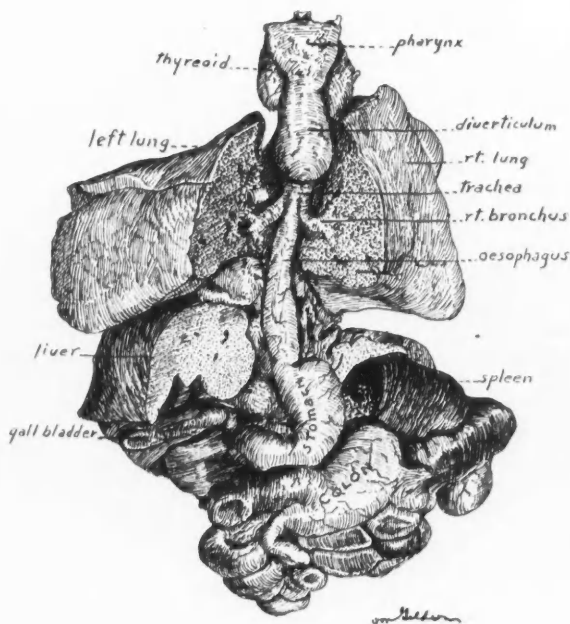


Fig. 2.—Drawing of dorsal aspect of necropsy specimen. The spleen, kidneys and bowel have been pulled to the right and part of the left lobe of the liver and portions of lung tissue cut away to show the relation of esophagus and trachea.



Fig. 3.—Semilateral view, showing the rounded pouch of upper esophagus and the fistulous opening of the inferior segment into the dorsal aspect of the trachea at the level of the bifurcation.



Fig. 4.—Roentgenograms of the esophagus in Case 2. The cul-de-sac of the upper esophagus is outlined by lipiodol. The oil has been aspirated into the bronchial tree.

between the ensiform cartilage and the upper end of the manubrium. Surgical procedure was considered inadvisable. The baby died three days after birth.

Necropsy.—The neck, chest, and abdominal organs were removed en masse and the esophagus carefully dissected out. The heart and great vessels are normal. Thymus, thyroid, and lymph nodes of the mediastinum normal. Spleen, liver, kidneys, and pancreas normal. The lungs are not very uniformly inflated. The larynx shows no abnormality. Just below the laryngeal cartilages the esophagus widens and forms a cul-de-sac with a rounded, smooth inferior border at the level of the bifurcation of the trachea (Figs. 2 and 3). The sac is freed readily from the trachea and is not connected inferiorly with other structures. Its wall is thick and mucosa smooth but rugose. The trachea appears normal as far as the bifurcation, at which point a small tube about the size of one of the main bronchi, but with a tiny lumen, inserts in the posterior wall of the trachea. This tube rapidly enlarges in its downward course to the size of a normal esophagus and enters the stomach in the usual manner. The stomach is small, and both the small and large intestine are normal and empty, except for a moderate amount of gas. The brain, spine, and osseous system were not examined.

Anatomic Diagnosis.—Congenital atresia of esophagus. Polydactylism of right hand.

CASE 2.—A female baby, weighing seven pounds fourteen ounces, was born on October 6, 1930. Both parents were in good health. The mother was a multipara. Her two previous children were normal deliveries and are both living and well. Neither show anomalies of any kind. This baby was spontaneously delivered at term and was easily resuscitated, but had a marked amount of mucus in the throat. The infant vomited and regurgitated immediately after each attempt at feeding, bringing up a large amount of mucus. Meconium was passed and urine voided normally. Gavage resulted in regurgitation and the baby got very blue.

Physical examination by Dr. Ernest Sevier revealed no abnormality other than wheezy breath sounds, some difficulty in breathing, and a croupy cough. A stomach tube was obstructed about fourteen centimeters from the lips.

X-ray examination was made on October 8, 1930. Films of the chest showed no abnormality of the heart, great vessels, or mediastinum. The lungs appeared uniformly well expanded.

On October 10, 1930, under fluoroscopic observation an attempt was made to pass a catheter down the esophagus. Each time obstruction was met at the level of the second rib anteriorly. Lipiodol to the amount of ten cubic centimeters was then injected,

outlining the upper portion of the esophagus as a sac-like structure about one centimeter in diameter with smooth, rounded inferior border at the level of the second rib anteriorly. The lipiodol was regurgitated into the mouth and nasopharynx in small quantities, these being immediately aspirated into the trachea, giving a fairly complete outline of the bronchial tree. None of the oil passed into the stomach. Films (Fig. 4) show no evidence of fistula between the trachea and esophagus. The usual amount of gas is seen in the stomach and intestine. An observation film seven hours later showed no trace of lipiodol in either the respiratory or digestive tract. The appearance is that of congenital atresia of the esophagus.

On October 10, 1930, esophagoscopy was done by Dr. J. Roy Jones, who confirmed the x-ray findings of atresia of the esophagus.

Surgical procedure was considered inadvisable and symptomatic treatment was instituted. The child expired on the eleventh day after birth. Permission for a necropsy was refused by the parents.

COMMENT

Ballantyne⁵ classifies esophageal malformation into seven groups:

1. Complete absence of esophagus.
2. Termination of esophagus in a simple cul-de-sac.
3. Termination of esophagus in a cul-de-sac, the lower rudiment of the canal communicating with the trachea or bronchi.
4. Tracheoesophageal fistula. Esophagus otherwise normal.
5. Membranous obstruction of the esophagus.
6. Esophageal diverticula.
7. Duplication of esophagus.

Group 3 comprises about 75 per cent of all reported cases of esophageal malformation. Case 1 is of this type and, although unconfirmed by necropsy, Case 2 in all probability belongs to this group.

The simplest and most logical theory as to the mechanics of this anomaly is put forward by Zeit⁶ and enlarged upon by McClellan and Elterich.⁷ It is based on the hypothesis of a faulty position of the lateral ridges which separate the ventral portion of the foregut to become the respiratory anlage (Fig. 5). If these lateral ridges turn dorsally instead of ventrally, as normally, the formation of many of the anomalies is readily understood. Other anomalies of the circulation or digestive systems are frequently associated with malformation of the esophagus.

The clinical picture in these cases is strikingly uniform. The child appears healthy, is active,

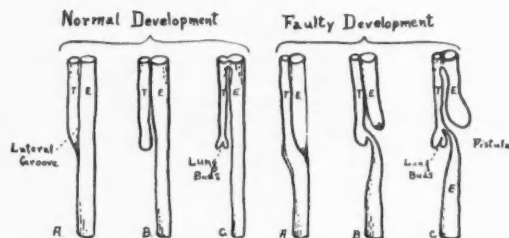


Fig. 5.—Schematic drawing to illustrate normal development and the faulty development in atresia of the esophagus. After McClellan and Elterich.

and passes meconium and voids urine normally. Mucus in the throat and nasopharynx is unusually profuse in amount. Liquid is taken hungrily, but is regurgitated within a few minutes, often with cyanosis and coughing. The vomitus contains much mucus and is foamy in appearance.

With the advent of roentgenologic observation it was possible to confirm the diagnosis by obstruction to the passage of the esophageal catheter and later by outlining the sac with bismuth or barium. In our patients lipiodol gave an accurate estimate of the size and character of the malformation. The use of iodized oil in the examination has the advantages of accuracy in filling of possible tiny fistulous tracts, of ease of administration and relative safety for the respiratory tract, since we may expect aspiration into the bronchial tree. Should the esophagus prove patent the oil is harmless in the stomach.

No cases of surgical cure of atresia of the esophagus are on record. Remedial measures must be aimed at correcting the communication with the bronchial tree as well as providing nourishment or the infant will die of pulmonary infection.

Although the diagnosis of congenital atresia of the esophagus is not difficult, it is one with a hopeless prognosis. Clear-cut visualization of the defect gives assurance to the physician in explaining the situation to the distressed family of the infant.

Sutter Hospital.

REFERENCES

1. Reynolds, R. P., and Morrison, W. W.: *Am. J. Dis. Child.*, 21:4, 1921.
2. Stukowsky and Boran: *Arch. f. Kinderh.*, 58:191, 1912.
3. Quoted by Shaw, H. L. K.: *Am. J. Dis. Child.*, 20:6, 1920.
4. Plass: *Johns Hopkins Hospital Rep.*, 1919.
5. Ballantyne, J. W.: *Manual of Antenatal Pathology and Hygiene*. William Wood & Co., p. 462, 1905.
6. Zeit: *J. M. Res.*, 22:45, 1912-1913.
7. McClellan, R. H., and Elterich, T. J.: *Am. J. Dis. Child.*, 26:4, 1923.

I wish to express appreciation to Dr. C. E. von Geldern for his interest and care in making the drawing of the necropsy specimen of Case 1.—R. S. G.

THE DIAGNOSIS OF MALIGNANCY BY THE STUDY OF THE CENTRIFUGED SEDIMENT OF ASCITIC AND PLEURAL FLUIDS*

By RAYMUND J. MILLZNER, M.D.
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THE technique of centrifuging ascitic and pleural fluids with the expectation of finding and recognizing tumor cells in the sediment is not new. The value of these examinations lies in the fact that they afford an additional source of information in cases that often are not well defined

clinically. Frequently a tentative clinical diagnosis of malignancy is confirmed, and occasionally a definite diagnosis of malignancy is made in cases that, clinically, appeared to be nonmalignant. The examination of a pleural fluid may give one of the first clues to the presence of an intrathoracic malignancy. Ascitic fluids from patients with obscure abdominal conditions may contain numerous malignant cells and thus obviate an exploratory operation. These examinations lack, however, the clinical popularity they should have. This is due in part to the use of indifferent methods in the preparation of the sediment and in part to difficulty in the interpretation of the microscopic pictures obtained.

METHODS IN USE

Two methods of examining the centrifuged sediment are in common use. The simpler, and the less satisfactory, is to smear part of the sediment on a slide and treat it as an ordinary blood smear. The staining qualities of the cells so treated are usually quite indifferent and the average slide gives a blurred picture worth relatively little for diagnostic purposes. With good technique and fresh fluids, well-stained slides are obtainable, but even with these the interpretation of the less common cell types is frequently difficult and uncertain.

The second method, that of embedding and sectioning the sediment, is more time-consuming, but when properly done gives excellent results. The technique employed during the preparation of the centrifuged sediment is of extreme importance, as the success or failure of the method depends almost entirely upon the physical properties of the sediment. A nonfriable, firm sediment which can be handled as roughly as an ordinary block of tissue is necessary for satisfactory study. Such a sediment rarely can be obtained from fluids centrifuged immediately after tapping. If pleural or ascitic fluid is allowed to stand for several hours in an ice box or at room temperature, partial sedimentation, associated with the formation of a scanty, diffuse, flocculent, fibrin network, occurs. This fibrin network may then be thrown down by centrifuging at high speed and firmly enmeshes the cellular elements of the fluid, holding them together during subsequent handling. Unfortunately, degenerative changes take place in the cellular elements of the fluid if it is allowed to stand too long. The interval between tapping and centrifuging must, therefore, represent a compromise between these two conflicting factors. We have found that most specimens of fluids develop sufficient fibrin network for a firm sediment after three to four hours. If kept in an ice box, the cellular changes during this period, as shown by comparison with fluids centrifuged immediately after tapping, are of no practical significance. Bloody fluids must be allowed to stand longer than nonbloody fluids, as the presence of much blood interferes with the obtaining of a firm nonfriable sediment.

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* Read before the Pathology and Bacteriology Section of the California Medical Association at the sixtieth annual session, San Francisco, April 27-30, 1931.

TABLE 1.—*Comparison of the Sediment Findings With the Final Clinical Diagnosis*

Type of Fluid	Totals	Positive		Per Cent of Correlation	Positive Clinical Diagnosis made by	
		Microscopically	Clinically		Operation	Autopsy
Ascitic	25	13	16	81.2%	8	8
Pleural	17	5	8	62.5%	0	8
Total	42	18	24	75.0%	8	16

The centrifuging must be done at the highest practical speed, over 3600 r. p. m. if possible. About five minutes at this speed is sufficient. Other conditions being equal, the higher the speed of centrifuging the firmer the resultant sediment. The clear supernatant fluid is then poured off

fixative may be used. After fixation the sediment is loosened by sliding a fine wire between it and the wall of the tube. The "button" of sediment then may be handled like an ordinary block of tissue during the subsequent processes of embedding and sectioning.

TABLE 2.—*Comparison of the Sediment Findings With the Type of Malignancy Present*

Type of Tumor	Fluid	No. of Cases	Tumor Cells Found in
Uterine adenocarcinoma.....	Ascitic	2	2
Papillary ovarian carcinoma.....	Ascitic	3	3
Carcinoma of the colon.....	Ascitic	3	1
Carcinoma of the stomach.....	Ascitic	1	1
Carcinoma of the breast.....	Ascitic	1	0
	Pleural	2	1
Primary carcinoma of the lung.....	Ascitic	1	1
	Pleural	3	2
Carcinomatosis (primary not determined).....	Ascitic	5	5
	Pleural	3	2
Totals.....		24	18

without disturbing the sediment, the tube refilled with fresh fluid, and recentrifuged. This is repeated until a sufficiently large "button" of sediment is obtained.

The sediment should be left undisturbed in the centrifuge tube during fixation. Ten per cent formalin is very satisfactory although any other

Most fluids show little tendency toward macroscopic layering of the sediment. When blood is present, however, the red cells settle to the bottom while the mesothelial cells, lymphocytes, and polymorphonuclears form a top layer. Tumor cells, if present, may lie in any or all of these layers. The "button" of sediment is, therefore, split in



Fig. 1.—Pleural fluid. Cardiac decompensation. Masses of vacuolated mesothelial cells in diffuse sheets and clumps lie in a stroma composed of fibrin and coagulated protein. Lymphocytes, red blood cells, and occasional polymorphonuclears are present.



Fig. 2.—Pleural fluid. High power of Fig. 1. The sheet-like arrangement and uniformity of the mesothelial cells are quite characteristic.



Fig. 3. Ascitic fluid. Carcinoma of the transverse colon. The clump of deep-staining, tumor cells stands out in sharp contrast to the lighter staining, more uniform mesothelial cells adjacent to it. The nuclei of the tumor cells are larger, and the cells vary in size and shape. Vacuolization is also present.

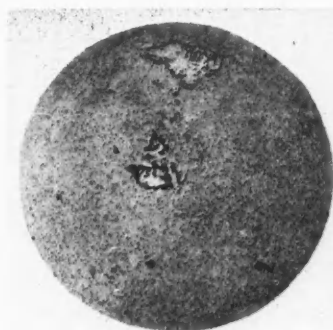


Fig. 4.—Ascitic fluid. Carcinomatosis. The tumor cells are definitely clumped, larger, and deeper staining than the other cells in the sediment.



Fig. 5.—Ascitic fluid. Carcinoma of the ovary.



Fig. 6.—Carcinoma of the ovary. Nearly every cell in the field is of neoplastic origin. Although the isolated cells show polymorphism, mitotic figures, and occasional multinucleation, they would justify only a tentative diagnosis of malignancy. There are also clumps of similar cells with an alveolar arrangement. The definite diagnosis of malignancy depends upon these clumps.

two from above downward after embedding and the sections cut to include all these layers.

The cellular elements found in transudates and exudates of nonmalignant origin vary in number and type according to the etiology of the effusion. Lymphocytes predominate in tuberculous and polymorphonuclear leukocytes in nontuberculous infections. In mechanical effusions, mesothelial cells, either singly or in sheets or groups, are present in large numbers. These cells are mononuclear and vary little in size and shape. When grouped about fragments of fibrin or coagulated protein, they may simulate, at first sight, the appearance of a papillary type of malignancy. Pleural effusions caused by either tuberculosis or malignancy may contain numerous red blood cells.

Effusion associated with malignancy, involving the peritoneum or pleura, frequently contain tumor cells and occasionally even small fragments of neoplastic tissue in which may be recognized the relations of the tumor cells to their stroma. Fluids containing tissue fragments or groups of tumor cells offer little difficulty and ordinarily permit a positive diagnosis of malignancy. The cells of these clumps usually are larger than the

other non-neoplastic cells of the sediment and because of their deeper staining give the slide a mottled appearance even under the low powers of the microscope. Frequently these clumps show a papillary or alveolar arrangement of the cells. Other fluids may contain a preponderance of isolated cells without any pattern formation. These offer the greatest difficulty in diagnosis, and, if no definite clumps are found, usually permit only a tentative diagnosis of malignancy. The differentiation of neoplastic cells from mesothelial cells in such sediments is based on marked variation in size and shape, or the presence of large numbers of unusual-appearing cells, as well as on cytological factors such as multinucleation, giant nuclei, and the presence of mitotic figures. Vacuolization of the cytoplasm is more common in tumor cells, but is also seen in the mesothelial cells of long standing effusions.

The results of the examination of the pleural or ascitic fluids from forty-two cases are given in Table 1. As very few specimens of fluid were

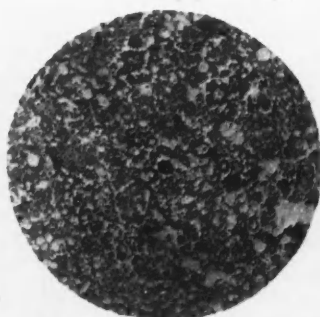


Fig. 7.—Ascitic fluid. Adenocarcinoma of the uterus. Most of the tumor cells are grouped in clumps and rosettes. A giant multinucleated tumor cell lies near the center of the field.

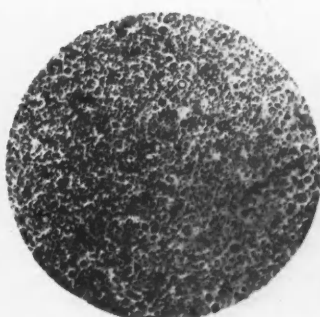


Fig. 8.—Pleural fluid. Primary carcinoma of the lung. Masses of tumor cells are arranged in clumps, rosettes, and pseudo-alveoli. Many of the cells have a vacuolated cytoplasm. Mitotic figures are numerous.

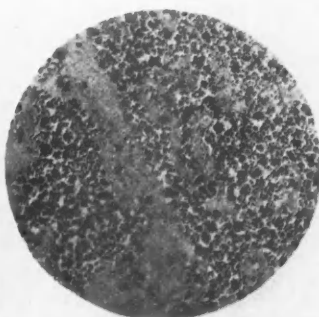


Fig. 9.—Pleural fluid. Primary carcinoma of the lung.

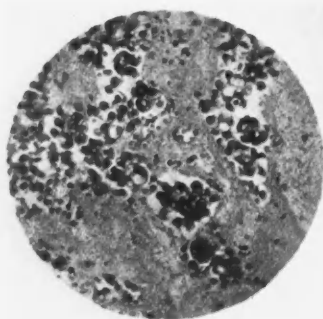


Fig. 10. — Pleural fluid. Primary carcinoma of the lung. A high power of Fig. 9. The polymorphism, deep staining, and vacuolization of the tumor cells are well shown.

malignant either by operation (exploratory or biopsy) or by autopsy. In eighteen of these, tumor cells were recognized in the sectionized sediment of the centrifuged ascitic or pleural fluids. Table 2 lists the type of malignancy in these cases.

The percentage of positive findings is high when the effusions are the result of malignant involvement of the pleura or peritoneum. In our series over 80 per cent of the specimens of ascitic fluid and over 60 per cent of the specimens of pleural fluid from such cases showed positive findings. These positive findings are quite accurate, and considerable reliance may be placed upon them in establishing the diagnosis and prognosis. On the other hand, a negative report does not rule out malignancy and is of no more significance than a negative report on any other laboratory procedure.

CONCLUSIONS

1. The examination of the sectioned centrifuged sediment of ascitic and pleural fluids is a valuable aid in the diagnosis of intra-abdominal or intrathoracic malignancy.

2. A positive diagnosis should be made only on the basis of definite fragments or groups of recognizable tumor cells. Isolated cells, regardless of appearance or the presence or absence of mitotic figures, justify no more than a diagnosis of probable malignancy.

The accuracy of these examinations is high and permits a positive or probable diagnosis of malignancy in about 70 per cent of the effusions caused by malignant involvement of the pleura or the peritoneum.

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REFERENCES

1. Mandlebaum, F. S.: The Diagnosis of Malignant Tumors by Paraffin Sections of Centrifuged Exudates, *J. Lab. Clin. Med.*, 2:580, 1917.
2. Quensel, U.: Zytologische Untersuchungen von Ergüssen der Brust und Bauchhöhlen mit Besonderer Berücksichtigung der Karzinomatösen Exsudate, *Acta Med. Scand.*, Sup. 23:1-107, 1928.
3. Seecof, D. P., and Boetsch, N.: The Value of Examining Body Fluids for Tumor Cells, *Proc. N. Y. Path. Soc.*, 24:2-9, 1924.
4. Zemansky, A. P.: The Examination of Fluids for Tumor Cells, *Amer. J. Med. Sc.*, 175:489-504, 1928.

sent to the laboratory from patients with proven cirrhosis of the liver or cardiac decompensation, the series shows a definite preponderance of cases clinically suspected of malignancy.

Twenty-four cases were proved

PERIARTERITIS NODOSA WITH REMISSION OF SYMPTOMS*

REPORT OF CASE

By W. E. R. SCHOTTSTAEDT, M. D.
Fresno

PERIARTERITIS nodosa is the pathologically descriptive name given by Kussmaul and Maier¹ in 1866 to a disease of the small arteries. A number of excellent summaries by Lamb,² Ophüls,³ and Singer⁴ have appeared in the medical literature. Singer⁴ brought the total of reported cases to 130. Since then thirteen new cases have been added. Less than twenty of the total cases have been reported in our American medical literature, partly, no doubt, because of the lack of routine histologic autopsy studies. In this country about 12 per cent of the cases have been diagnosed before autopsy through biopsy studies of skin lesions or tissue removed at operation.

The following case report is presented not only in the hope of stimulating interest in the etiology and diagnosis of periarteritis nodosa, but because of its favorable response to arsenical treatment.

REPORT OF CASE

M. N., age forty-one. Barber. On September 17, 1930, he came because of "lumps all over body." Family history negative. Personal history negative. Three weeks before, he developed "lumps over the body." He had to give up his work, also his drum corps work because of pain when handling the sticks. For the past several weeks he has had severe pains in the hands, arms, and legs. Of late these pains have been sufficiently severe so that it was impossible for him to shake hands, difficult to walk, and almost impossible to sleep. Two or three new skin lesions appeared every day.

Examination.—Eyes negative. Blood pressure, 130/82. Pulse 76. Nose: Septum deviated to the left. Tonsils septic. Heart, lungs, and abdomen negative. Skin: Over the extensor surface of the forearms and on the legs there were small, hard, movable nodules about the size of shot. He also had three subcutaneous lesions on the face. Wassermann negative. Urine showed pus cells, a few coarse granular and small granular casts, with an occasional hyaline cast.

A biopsy specimen was sent to Dr. A. S. Warthin at the University of Michigan for histologic examination and he has kindly sent the accompanying microphotographs. I am also indebted to Doctor Warthin for the following pathologic description: "The blood vessels (arteries) present the appearances of an advanced second or inflammatory stage of periarteritis nodosa in the form of a marked polymorphonuclear infiltration of media and adventitia, and extending through the perivascular lymphatics. There are areas of localized necrosis of the vessel walls, with destruction of the intima and inner media, in some places extending entirely through the vessel walls. Associated with the cellular infiltration there is a fibrinous exudate in the form of fibrin threads. In some areas there is a reactive proliferation of the intima, and an organizing thrombus in the lumen. Some vessels are completely obliterated by the thrombus. Some of the smaller arterioles show a later stage

* Read before the joint meeting of Pathology and Bacteriology and General Medicine Sections of the California Medical Association at the sixtieth annual session, San Francisco, April 27-30, 1931.

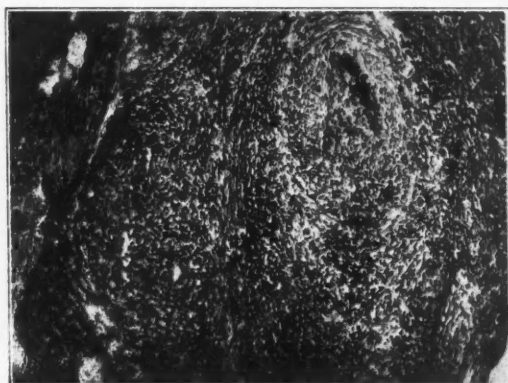


Fig. 1.—Low-power magnification of biopsy specimen of skin nodule, showing polymorphonuclear infiltration of the media and adventitia, and extending through the perivascular lymphatics.



Fig. 2.—High-power magnification of the vessel in Fig. 1, showing the destruction of the intima and inner media with cellular infiltration; also reactive proliferation of the intima and an organized thrombus in the lumen.

of fibroblastic proliferation. The localized lesion in the vessel wall produces a characteristic elliptical distortion of the vessel. There is no suppuration, and no pyogenic organisms are present. At the site of the necrotic areas in the media there is an aneurysmal bulging of the outer part of the vessel wall remaining."

December 15.—Blood: Hemoglobin, 70 (Dare); red cells, 4,020,000; white cells, 15,600; polynuclears, 47; transitionals, 3; lymphocytes, 18; eosinophils, 32. Arneth index, 56.5 to 43.5.

In the meantime the patient had been given neosalvarsan, .45 to .9, once a week. He gradually improved and had, during the last week, only one new lesion, this being on the little finger of the right hand, which lasted only one day. On December 18, 1930, he resumed work, feeling free from pain and, as he stated, absolutely well. Two months later he returned, stating that in the past three weeks four new lesions had appeared—one on the finger and leg, and two on the face. At this time: Hemoglobin, 65 (Dare); white blood count, 32,000; polynuclears, 42; lymphocytes, 21; eosinophils, 37. Arneth index, 58.5 to 41.5. The urine: Specific gravity, 1015. Negative, except for the microscopic examination, which showed a few leukocytes, a few red blood cells, and a few small granular casts. He was given neosalvarsan .9 intravenously, four doses, five days apart. No new lesions after February 16.

March 23.—No recurrence. Urine: Specific gravity, 1022; microscopic examination showed an occasional leukocyte; casts rare.

April 22.—Hemoglobin, 70 (Dare); white cells, 9200; red cells, 4,480,000; polynuclears, 72; lymphocytes, 25; eosinophils, 3. Arneth index, 47 to 53. The urine: specific gravity, 1023. Negative except for the microscopic examination, which showed a few pus cells and occasional small granular casts.

COMMENT

Fortunately in the case presented we were dealing with one of the 20 per cent of patients who have skin nodules, through biopsy study of which this disease can be diagnosed definitely. Kussmaul and Maier¹ also called attention to the value of muscle biopsy in suspected cases because there is a loss of cross striations of striated muscle. The clinical symptoms and signs vary greatly. The onset may be gradual or acute, the temperature may be normal or moderately elevated, pulse normal or increased, blood pressure low, normal

or high, extreme weakness, headache, anorexia, sweating, chilliness, sore throat, diarrhea, constipation, vomiting, colicky abdominal pains, at times blood in loose stools, sleeplessness because of pain, hard subcutaneous nodules in 20 per cent purpura, peripheral neuritis, myositis, cramp-like pains on deep pressure over the muscles, pains in the joints, asthma, hemoptysis, disturbances of sensation, urticaria, nephritis, and an unusual leukocytosis with eosinophilia.

Circulatory symptoms apparently are absent and respiratory symptoms are rare, but Kountz⁷ and others have reported cases with jaundice. One gets the general impression of an acute infection, frequently characterized by irregular exacerbations and remissions; the complications resulting from the multiplicity of lesions easily overshadow the actual disease, and thus account for the almost universal mistakes in diagnosis.

The blood picture is that of a secondary anemia with a leukocytosis which varies from 9000 to 66,000 in some cases, with an increase of polymorphonuclears and an Arneth shift to the left, an eosinophilia in some cases reaching over 50 per cent, a most striking picture.

The urine findings are those of a mild or moderately severe glomerular nephritis, which is present in all cases reported.

The most careful bacteriologic work has been done by Lamb, who found a streptococcus but thought it a contamination because he could not reproduce the disease by inoculation in animals. The pathologic findings have been minutely described by Kussmaul and Maier,¹ Lamb,² Ophüls,³ Keegan,⁸ Singer,⁴ Bennett and Levine,⁹ and others.

Briefly stated, the disease affects the small arteries, causing nodules and aneurysms, with the resultant changes in the organs due to the lack of blood supply. The gross appearance is a solid nodule usually at the branching of a small artery, varying in size from a mustard seed to a pea. Microscopically we find the main changes in the adventitia, where there is a periarterial infiltra-

tion, affecting the adventitia, gradually involving all coats of the artery, leading to granulation and finally fibrosis. These changes may be found in any organ and have been found in the kidneys in all cases.

The disease has been variously classified, depending on the predominance of clinical symptoms and pathologic findings such as: cerebral, cardiac, pulmonary, renal, abdominal, neuromuscular, and dermatologic. Manges and Baehr¹⁰ do not think the disease is rare. The majority of patients are between ten and forty, though a case has been reported in a nine months' baby and a man of seventy. Males predominate, five to one. Harris and Friedrichs¹¹ produced the disease in animals, though their experiments have not convinced many other investigators.

The disease has ultimately proven fatal in all but two or three of the cases reported; but some authors believe many mild cases which have not been recorded have recovered spontaneously.

The etiology is obscure. The theory that syphilis is a cause has been abandoned. Some authors believe it to be the result of a toxic agent, possibly a streptococcal process of a subacute type or an allergic reaction from a recent streptococcus infection. Others, of whom I am one, believe it to be a specific infection because clinically and pathologically the disease resembles typhus and Rocky Mountain spotted fever, and because an identical disease has been reported in epidemic form in stags. It has also been found in hogs and cattle.

Salicylates, atophan, injections of milk, Kolargol, Fowler's solution, etc., were used by Blum⁸ and others, but since their patients died, it was deemed preferable to follow the suggestion of Carling and Hicks,⁶ who reported remission of symptoms following the use of arsenicals intravenously.

The case here reported is of interest because the patient has so far responded very favorably to arsenicals and is now in remission.

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REFERENCES

1. Kussmaul, A., and Maier, R.: *Deutsches Arch. f. klin. Med.*, 1:484, 1866.
2. Lamb, A. R.: *Arch. Int. Med.*, 14:481 (Oct.), 1914.
3. Ophüls, W.: *Arch. Int. Med.*, 32:870 (Dec.), 1923.
4. Singer, H. A.: *Arch. Int. Med.*, 39:865, 1927.
5. Blum, K.: *Wien. klin. Wchnschr.*, 42:40, 1929.
6. Carling, E. R., and Hicks, J. A. B.: *Lancet*, 204:1001, 1923.
7. Kountz, W. B.: *Arch. Path.*, Vol. 10, No. 1, p. 55 (July), 1930.
8. Keegan, J. J.: *Arch. Int. Med.*, 36:189 (Aug.), 1925.
9. Bennett, A. A., and Levine, S. A.: *Am. J. Sc.*, 177:853, 1929.
10. Manges, M., and Baehr, G.: *Am. J. M. Sc.*, 162:162, 1921.
11. Harris, W. H., and Friedrichs, A. V.: *J. M. Research*, 43:285, 1922.

RECONSTRUCTION OF THE RADIAL ANNULAR LIGAMENT

By HAROLD E. CROWE, M. D.
Los Angeles

"THE interesting feature of the skeletal anatomy of the elbow and forearm is the marked degree of supination and pronation between the radius and the ulna. This is essentially due to the small round head of the radius articulating with the proximal end of the ulna. These two bones are held so firmly together by tendinous and ligamentous structure that dislocations between them are practically unknown. In fact, the head of the radius will be fractured before it will dislocate" (K. G. Hanson and I. D. Horwich¹).

"Dislocations of the head of the radius form, according to Stimson, from 1.4 per cent to 4 per cent of the total number of dislocations seen at large clinics, and are, consequently, far from being uncommon" (Henry Milch²).

The discrepancy in these statements is interesting, the first being the incentive for this note and the second placing a slight damper on the author's enthusiasm. The operation described being original, it was found that a similar, more complicated operation had been published by Milch in 1928,² and an identical operation published by Campbell in 1929.³ The point of general interest, then, remains only in the unusual opportunity to compare an untreated and an operated case.

In the same week two patients appeared in our clinic. The first had an anterior dislocation of the radial head, unreduced in spite of five years of "faith healing," and showed 40 degrees of valgus deformity with loss of the last 5 degrees of flexion and the last 60 degrees of extension (Figs. 1, 2, and 3). Pronation and supination were normal. The deformity apparently resulted from five years' growth in the presence of an untreated dislocation. The second patient had an unrecognized dislocation of five weeks' duration, which was complicated by a large ossified hematoma in the anterior elbow-joint capsule. An open reduction and reconstruction of the annular ligament was done (Figs. 4, 5, and 6).

Operation.—Posterior lateral incision longitudinally for three inches over the normal site of the head of the radius. Dissection forward to excise the ossified hematoma. Transverse incision of the supinator muscle to expose and retract the deep branch of the radial nerve as it passed around the neck of the radius in the belly of this muscle. The annular ligament was found to be practically unrecognizable, so completely had it been shredded in the original injury. A strip of fascia lata, folded on itself to bring the shiny side out, was passed deep to the nerve around the shaft of the radius close to the head and carried subcutaneously to a drill hole in the adjacent subcutaneous ridge of the ulna. Drawn tight and sutured with No. 3 Turner's silk, this new ligament held the head of the radius back and toward the ulna in its natural position, at the same time allowed free motion in all directions without displacement (Fig. 7).

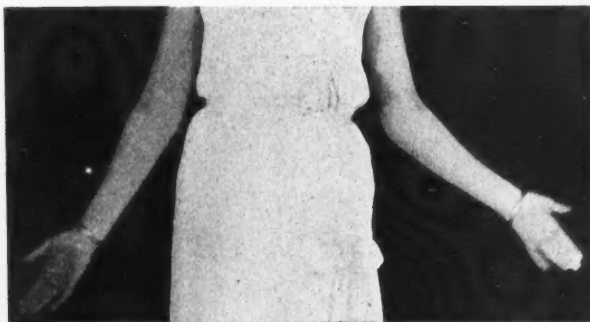


Fig. 1.—Untreated. Cubitus valgus 40 degrees.



Fig. 4.—Operated.

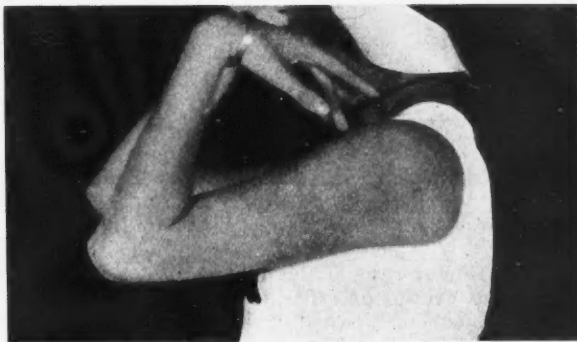


Fig. 2.—Untreated. Loss of five degrees of flexion.



Fig. 5.—Operated. Full flexion.

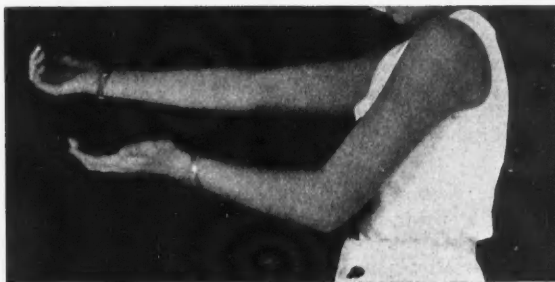


Fig. 3.—Untreated. Loss of 60 degrees of extension.



Fig. 6.—Operated. Full extension.

Three days' splinting, followed by active passive motion for two weeks, lead to normal function in four months' time. Observed at the end of two years, function continues normally in the operated elbow.

Orthopedic Hospital.

REFERENCES

1. Hanson, K. G., and Horwich, I. D.: Epicondylitis Humeri, *J. A. M. A.*, Vol. 94, May 1930.
2. Milch, Henry: Dislocation of the Head of the Radius: Suggestion for a New Operative Procedure, *J. Bone and Joint Surg.*, Vol. 10, No. 1, January 1928.
3. Campbell, Willis C.: Malunited Fractures and Unreduced Dislocations About the Elbow, *J. A. M. A.*, Vol. 92, January 12, 1929.

Every medical student should remember that his end is not to be made a chemist, or a physiologist, or an anatomist, but to learn how to recognize and treat disease, to become a practical physician.—*Sir William Osler.*



Fig. 7.—Diagram of operative procedure.

GASTRIC OBSTRUCTION—AS A RESULT PERISPLENIC HEMATOMA*

CONFUSION WITH DIAPHRAGMATIC HERNIA

By ROBERT A. POWERS, M. D.

Palo Alto

A PREVIOUSLY healthy male patient of age twenty-seven, was pinned beneath a car and sustained injuries to the abdomen, transverse processes, and left lower thorax. He was admitted to the hospital in a state of shock, recovering from the shock in about twelve hours. During a period of thirty days following the accident he sweated profusely, could eat very little, vomited frequently, and on three occasions passed into a state of shock. Shortly following the accident a left pleural effusion developed, necessitating aspiration. Leukocytes fluctuated between twelve and twenty thousand. The abdomen was rigid. The patient lost weight, and a state bordering on starvation ensued. Clinical examination suggested an abdominal injury with possible hernia of the diaphragm. The patient's condition was such that immediate operation was advised.

Roentgen-ray examination at this time showed a left pleural effusion, considerable elevation of the left diaphragm, and several fractured right lumbar transverse processes. Upon taking barium the stomach showed an upper loculus which appeared to be at the level of, or slightly above, the elevated left diaphragm. The median portion of the diaphragm shadow was obscured by opacity within the thorax. The barium passed very slowly into the fundus. Twenty-four hours following the opaque meal the upper gastric pouch still retained considerable barium and appeared at the level of or above the diaphragm. The abdomen was opened and was found filled with serum. A large hematoma filled the left upper quadrant, surrounding the spleen and displacing the cardiac portion of the stomach high up against the diaphragm. No attempt was made to remove the spleen, which was entirely covered with fibrinous exudate.

There appeared to be no doubt that the spleen was ruptured and that the three separate and distinct episodes were incident to delayed hemorrhage.

The patient had a stormy three months' convalescence during which abdominal paracentesis was necessary on several occasions. Upon examination three months following the operation and four months following the injury, the patient still complained of weakness, gas in stomach and intestines, dyspnea on exertion, loss of weight, and pain in left lower chest.

On physical examination he weighed 112 pounds as against 136 pounds before the accident. He looked weak and ill. The cervical lymph nodes were enlarged. The pulse was regular. Blood pressure, 100/60. There was dullness over the left lower thorax. The upper abdomen was distended and board-like. No shifting dullness in flanks was present. The hands were cyanotic.

* Read before the Radiology Section of the California Medical Association at the sixtieth annual session, San Francisco, April 27-30, 1931.

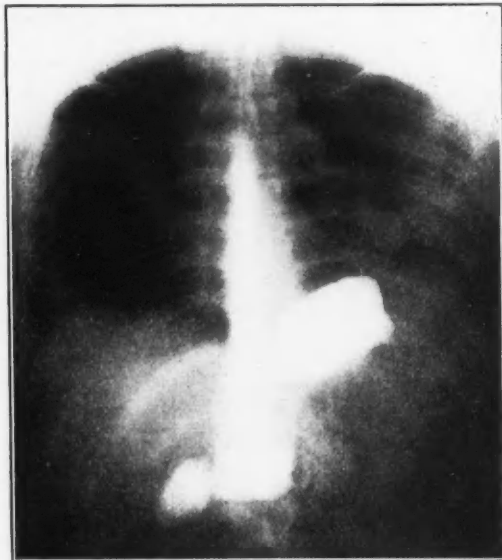


Fig. 1.—Demonstrating upward displacement and deformity of the stomach due to perisplenic hematoma.

Fluoroscopy at this time showed a homogeneous density over the left lower lung field. The diaphragm appeared elevated. The heart was displaced to the right. Barium was delayed at the cardia and passed slowly into a pouch which was higher than normal. The body of the stomach was constricted. The lower gastric contour was irregular. There was no six-hour residue. There appeared to be some irregularity of the splenic colon. The blood count was normal. At present, ten months following, the patient is still partially disabled.

COMMENT

The case reported is of interest for two reasons:

1. Gastric obstruction as a result of a perisplenic hematoma is quite rare. No mention of this condition is made in current works on injuries to the spleen.
2. The case demonstrates that opacity in the left lower thorax may cause some confusion in the diagnosis of diaphragmatic hernia. This would appear to be particularly true where there is marked upward displacement of the stomach and a 24-hour gastric retention.

218 Medico-Dental Building.

The 300,000th Leitz Microscope.—The optical works of E. Leitz, in Wetzlar, Germany, have completed their 300,000th microscope. This instrument was presented at an appropriate gathering to Geheimrat Professor Dr. Ludwig Aschoff of Freiburg, in Breisgau, Germany, a scientist and physician of world renown in the pathological and anatomical field of scientific endeavor.

The dedication of this microscope follows a custom of the firm of E. Leitz to present every 50,000th microscope to an outstanding scientist or institute, thus expressing their appreciation of the cooperation extended by leading authorities to the Leitz works.

The 100,000th microscope was presented to Dr. Robert Koch of Berlin, and the 150,000th to Dr. Paul Ehrlich of Frankfurt.—*Journal of the South Carolina Medical Association*, December, 1931.

BEDSIDE MEDICINE FOR BEDSIDE DOCTORS

An Open Forum for brief discussions of the workaday problems of the bedside doctor. Suggestions of subjects for discussion invited.

MENTAL DISEASES IN THE ELDERLY

EDWARD W. TWITCHELL, M.D. (909 Hyde Street, San Francisco).—Since it is desirable in most cases of insanity in the elderly to keep the patient at home as long as possible, and as many of these patients may be kept at home throughout the rest of their lives, it is well that the general practitioner, who first comes in contact with them and who oftentimes cares for them to the end, should be able to recognize these mental states early and should know the best means of control of them.

Six or seven different varieties may generally be recognized, although no two authorities will agree when it comes to classification, but the following grouping is sufficient for all practical purposes.

1. Simple depressive states. 2. Chronic delusional states. 3. Acute and subacute delirious states. 4. Cerebral arteriosclerosis with psychosis. 5. Senile dementia of atrophic type. 6. Presbyophrenia. 7. Alzheimer's disease. The last two are considered by some to be practically identical.

1. The simple depressive states are those which frequently in women are called involuntal melancholia. This is a disease which Kraepelin, although he originally admitted it, eventually rejected, feeling that in practically all instances it was simply a late manifestation of manic-depressive insanity. Others, however, feel that there are numerous instances of this late appearing depression in which the patients have never shown any cyclothymic trends during earlier life and therefore it should be regarded as being a distinct disease. This depression may be of the mildest or become of extreme severity. It may be of a few weeks' or months' duration and it may exist the rest of the life of the patient. Many of them will spend periods in sanatoria or state hospitals, and then come back home for a greater or lesser length of time. The danger of suicide is ever present. The treatment is essentially one of hygiene and nursing.

2. The chronic delusional states are oftentimes more difficult to manage. These patients, who are by some regarded as simply late appearing paranoids, become suspicious, fancy they are being spied upon, or poisoned or gassed, or conspired against. They protect themselves in all sorts of ways, such as changing locks on doors, pasting paper over keyholes, putting heavy blinds on windows, carefully scrutinizing all the food they eat, and withdrawing themselves from the society of those whom they suspect. Sometimes a delusion

will be one of jealousy and the object of the jealousy will be made miserable by the patient. In this way they become what the French designate *persecuteurs persecutés*. This condition often makes it impossible for the patient to adjust himself to life outside of an institution. It is conceivable that such patients may be extremely dangerous when protecting themselves against the supposed machinations of their persecutors.

3. The acute and subacute delirious states are apt to have a rapid onset. Women seem to be more often afflicted than men and the time of appearance is frequently in the sixth decade, although it may appear ten years earlier. After a period of uneasiness, delusional ideas appear, followed soon by hallucinations of sight and hearing. Patients soon get into a state of excitement. This excitement makes them difficult of restraint and they have to be transferred to sanatoria or state hospitals. They will bite, scratch, strike those about them in their effort to free themselves from control. They will sometimes tear their own hair or beat themselves in their desperation. The picture gets wilder and wilder and a fever develops, sometimes rising to 106 degrees or 107 degrees. With this fever and rapid pulse and excitement, there is more or less complete lack of sleep. The patient rapidly gets into a condition of exhaustion and in a few weeks is brought to a state of collapse, and death soon follows. Sometimes an infection may be demonstrated intravital. At other times while one takes it for granted, it is not demonstrable. Pathologic findings are variable; sometimes there is simply a considerable degree of hyperemia of the meninges and the brain, in other cases extensive destruction of nerve tissue has been demonstrated. This type of case was formerly often known as acute delirium. It is not only found in the presenium but also occasionally in those of more advanced age, say, in the late sixties. The mortality rate of these cases is high. While some patients go on to a condition of permanent mental deterioration and some few recover, the most of them die. There are a number of varieties and subvarieties which in a general way answer the above description, but the important point is that they come on relatively rapidly, run an extremely stormy course, with the wildest sort of delusions and hallucinations and generally end fatally.

4. Cerebral arteriosclerosis commonly accompanies advancing years, but it does not invariably do so. While many of the mental conditions found in the elderly are due to arteriosclerosis, by

no means are all of them. Cerebral arteriosclerosis is usually described as being of two types: A. Small vessel type; B. Large vessel type. In the small vessel type, the patient begins by showing the usual signs of senile mental deterioration, that is to say, failure in memory, increasing fatigability for mental work, impaired judgment, attacks of drowsiness, headaches, dizziness, character changes of greater or less importance, transitory monoplegias, or hemiplegias, disturbances of speech, epileptiform attacks, etc. The condition creeps on gradually but is apt to be marked by sudden aggravations, the patient recovering always at a lower level than he was prior to his attack. All symptoms increase in severity and it is characteristic that certain faculties may suffer considerably, while others will be relatively unimpaired. In other words, the involvement is a patchy one. This clinically makes the condition distinguishable from general paresis where the psyche is involved as a whole. In these cases, as the patient gradually gets feebler and feebler, death may come without any striking occurrences. The patient simply grows a little bit feebler, a little more deteriorated mentally, finally dropping off to sleep permanently. In the large vessel type of involvement, the disease will begin, say, by hemiplegia, leaving the patient more or less crippled thereafter physically and with greater or less amount of mental deterioration. If aphasia is associated, the plight of the patient is worse than if aphasia is absent. Death may come suddenly as the result of a second, third or fourth stroke. Cerebral arteriosclerosis cannot always be postulated from the condition of peripheral vessels. Excellent radials may exist in conjunction with very chalky cerebral vessels. The retinal vessels give a far better index as to the brain vessels than do any other accessible arteries. A great proportion of these patients can be kept at home during the entire course of the disease, the greatest difficulty being the management of those patients who are rendered helpless by paralysis. The mental condition may be sometimes a stormy one and many of these patients are as violent as any manic. Generally, however, the difficulty consists in their inability to take care of themselves, in their tendency to lose themselves in their own homes, to wander around at night, to get out of the house and get lost in the streets, and so on. Toward the end, much difficulty is encountered in the care of those who are incontinent of urine and feces and they become very trying patients from a nursing standpoint.

5. The simple atrophic type of senile dementia begins very much in the same way that the arteriosclerotic does, but it has none of the focal manifestations which always serve to differentiate the arteriosclerotic disease from another. Here the condition is apt to be simply an increasing quantitative lowering of the intelligence, until finally the patient ends, "sans teeth, sans eyes,

sans taste, sans everything." The pathologic findings differ from the arteriosclerotic ones in that the vascular changes which are so characteristic of arteriosclerosis are lacking. Instead there is merely an atrophic state, the vessels being in relatively good condition.

6. Presbyophrenia. This is a condition about which there is much discussion. The name was originally used by Kahlbaum. Wernicke developed the idea and many psychiatrists since have described the disease as a definite entity, but as Bleuler says, the description of one author is quite different from that of another and the same author, writing at different periods, describes two different things. Kraepelin says that most patients are over seventy years of age and yet authors will agree that cases are to be encountered as early as the forties. A striking thing about all presbyophrenics is the peculiar conservation of certain abilities, with a very marked loss of others. For example: a patient may be able to converse rather entertainingly, and to the superficial observer may not be noticeably abnormal, but may all the while be completely disoriented and have no real appreciation of his surroundings. The chatty old gentleman toward the end of the conversation asks you if you are, by any possibility, Benjamin Franklin, or will tell you that he is sixty years of age and that he has two sons who are seventy-five. Memory defects are common and it is due to this that many assume the disease to be identical with Korsakow's, although a toxic factor and neuritis will be entirely lacking. Certainly, while in some respects the disease picture may resemble Korsakow's, there is no excuse for confounding it with a real Korsakow, which must have a toxic polyneuritis as basis of the picture. One thing is apt to be noticeable about these patients and that is that they are generally free from depression. As a rule, depression is a part of the picture of most presenile and senile psychosis. The presbyophrenic, however, is noticeable for his contentment. The presbyophrenic, in many instances, may be kept at home if there is anybody to look out for him at all. He simply needs nursemaid care.

7. Alzheimer's disease. This is another disease, concerning which there has been much controversy. With reason, Bleuler calls this identical with presbyophrenia. Like presbyophrenia, it may start in the forties; however, it may not appear until the late sixties or seventies. It is, however, apt to proceed pretty rapidly to a very complete dementia and practically all authors insist upon the speech disturbances. In the well advanced case, the speech may consist of constantly repeated phrases, groups of words, or inarticulate sounds. Death may follow within a few years after the onset. The pathologic findings as described by Alzheimer are an enormous destruction of cortical cells with peculiar bundles of fibrinous material. These patients often get rapidly to such a point that home care is impossible.

One difficulty with the mental conditions of advanced years is the reluctance on the part of state institutions to receive such patients. The attitude of the state hospitals is that all ordinary cases of senile dementia should be kept in the counties in which they originated and in many instances where such patients have been committed, they have been returned to their homes after the condition was definitely determined by examination at the hospital to which they had been committed. Generally such patients can be treated in relief homes, where the families are not able to pay for care in some private institution, or employ adequate nursing at home. In many instances, however, it means that some devoted daughter or sister must sacrifice herself for a period of anywhere from six months to as many years.

* * *

AARON J. ROSANOFF, M.D. (1930 Wilshire Boulevard, Los Angeles).—When a mental disorder in an elderly person first comes to medical attention, an investigation should at once be instituted with a view to determining the exact diagnosis, pathology, and prognosis, as a basis for a plan of management and treatment. It has already been pointed out in Doctor Twitchell's opening paper that in many instances a mental disorder not peculiar to senility happens to occur in an elderly person. In such cases there are no special therapeutic indications. The cases are handled approximately in the same manner as those observed in younger persons.

In the cases presenting mental disorders which are more or less peculiar to advanced ages, such as senile dementia, cerebral arteriosclerosis, Alzheimer's disease, and involutional melancholia, the physician is confronted with some practical issues.

Perhaps the first question that has to be dealt with is that of the amount of custody and supervision which the patient requires. In cases manifested by excitement, violent and aggressive tendencies, or by suicidal impulses, or by noisy or destructive behavior, institutional care should as a rule be arranged. Whether it is to be care in a public institution or in a private sanatorium depends mainly on the financial resources of the patient or his relatives.

It is, of course, also possible even in such a case to avoid placement in an institution by making elaborate arrangements for care in a secluded place with day and night nurses, but such arrangements are very expensive and present no real advantage.

Patients who are free from violent or dangerous tendencies can be cared for in a private home indefinitely, although they, too, require, of course, a certain amount of supervision.

A second practical problem that presents itself sooner or later in the great majority of cases arises out of physical disabilities with which

mental disorders of elderly people are often associated. The patients become bedridden, have to be dressed, undressed, bathed, fed; they also often soil or wet their clothing or bedding, either from loss of sphincter control or from mental deterioration or both. In such cases there is much danger of the development of bedsores and of a complicating fatal bronchopneumonia. The latter may be produced either by inspiration of food in cases of partial paralysis of the mechanism of deglutition, or it may occur as a hypostatic affair, or from exposure to cold acting upon a weakened resistance.

This problem is to be met by organizing efficient nursing. To do so in a private home usually imposes months or even years of strain upon any person undertaking to care for such a case. In my opinion the advice to the family in such a case should again be in favor of public or private institutional care. Such advice is in the interest not only of relieving near relatives of an abnormal burden, but also of securing for the patient a better organized and more skillful nursing care.

A third practical problem is that of arranging for a winding up of the patient's affairs in anticipation of the physical disability and the mental deterioration which is to be expected in most cases of mental disorders peculiar to senility.

For example, as soon as a diagnosis of cerebral arteriosclerosis has been made, and while the patient is still legally competent, the relatives should be made fully aware of his condition and of the prognosis, retirement from business should be insisted on, as well as the making out of a will, etc.

These, of course, are delicate matters to broach to patients, and the physician can help a great deal by his participation in a tactful handling of them.

Recoverable cases of mental disorder occurring in elderly people are, of course, to be managed in a very different way; but, as has already been stated, these are not the cases peculiar to senility and present no special indications merely by reason of having occurred in an elderly person.

* * *

SYDNEY KINNAR SMITH, M.D. (230 Grand Avenue, Oakland).—It would seem that our most constructive work as physicians in handling problems of senile change would lie more especially in the prophylactic field. Obviously the curative aspect is not hopeful, other than in a symptomatic procedure. When senility has set in, both physical and mental, the problem is essentially one of custodial care in one form or another. It is impossible, of course, to say at what point old age begins, and, as a matter of fact, is not particularly important. If we are to consider the handling of old age problems we must anticipate this period and make our plans accordingly. We

all see individuals in the period from fifty to sixty who are capable of performing all the functions of life with regularity, but who are incapable of meeting the stresses of life in the way that they did in years past. It is at this period that we should lay definite plans looking toward a physically and emotionally satisfactory old age. Naturally, there is a great individual difference in the mode of onset of symptoms of decline, depending on previous habits of life, as well as individual peculiarities and hereditary predisposition. Individuals, at a time when their judgment is yet sufficiently reliable, should be aided in planning the years to come. Moderation in all activities should be the keynote of procedure and the expenditure of unnecessary energy be avoided. With most individuals past middle life there is less physical, emotional and intellectual drive. Cares and anxieties which formerly were easily overcome now become unbearable. Intellectual endeavor which previously was not attended by undue fatigue, now is followed by languor. Also physical effort is accompanied by a new weariness.

Our council should be, therefore, against undue anxiety during this presenile period. New undertakings involving large financial responsibilities should be avoided. Involvement in legal procedures is a strain that takes a large toll in this period and should be avoided if possible.

The pressure of social duties should be minimized, the strain of "late hours," large gatherings, indigestible food at late hours should be properly regulated.

Sleep is a problem of the senile and presenile period that should be most carefully considered. The tendency is toward shorter hours of sleep and to wakefulness. Unfortunately the body at this age is needful rather of more than of less sleep. Consequently it should be our aim, medically, to bring about conditions conducive of sleep. We may well employ prolonged neutral baths before retiring, sedative drinks, and occasionally mild sedatives. Above all we should insure physical relaxation in the hours preceding retirement.

In pursuance of our aim of bringing about moderation, we should aim at a rather definite plan of daily activity, including reasonable amount of exercise, rest, recreation, etc. Probably in this connection one of our outstanding efforts should be in the development of a hobby. We might almost consider the old person without a hobby as a hopeless problem. By inculcating a real interest in the presenile period we may avoid the later resort to the childish procedures often introduced in the senile program of trivial manual pursuits. Many practical suggestions in this regard may be found in Dr. Lillian Martin's recent book on the subject of Old Age.

Our effort in these comments is to urge a far-sighted consideration of senile problems, beginning in the presenile period, rather than waiting

for the hopelessness of senile dementia. We do not mean to suggest that the result of senile and arteriosclerotic changes in the brain can be overcome, but we do suggest that with reasonable planning the manifestations of these changes may be minimized and the individual made a much more agreeable person for himself and for others to live with.

A Cash Incentive to Broader Public Relations.—The Board of Trustees, impressed with the activities of the Committee on Publicity of the Philadelphia County Medical Society and the determination of the Committee on Public Relations of the State Society to make the year 1932 a banner year in the development of a better understanding by the people of Pennsylvania of the purposes of our organized medical profession, have evolved a plan for participation by the State Society in the endeavors of wide-awake county societies to develop closer contacts with the community health and sickness problems in their respective counties.

The reasons for such stimulation, the source, character, and method of imparting such knowledge to the public and the process by which approval may be expressed in terms of financial assistance, are all set forth in the accompanying resolution adopted by the Board of Trustees at their meeting December 8, 1931. The chief aim in this action by the Board of Trustees is encouragement to even the smallest of our active county societies in all efforts to convince the people of their respective counties that the local medical profession is progressive, unselfish, and capable of and willing to assume leadership in all community activities pertaining to sickness prevention.

Resolution:

Whereas, It is believed that the public relations activities of certain of our component county societies by means of authoritative and properly censored articles in the public press and over the radio, extend their benefits to the public and redound to the credit of physicians in certain surrounding counties; and

Whereas, It is believed that the State Society can best advance the relations of its members with the public throughout the state by offering financial assistance as well as educational leadership to the component societies which have developed a proper interest in such work; and

Whereas, The expense of carrying on such activities varies in the different county societies; therefore be it

Resolved, That the Board of Trustees of the Medical Society of the State of Pennsylvania approve the reimbursement to such component societies of such expense, on recommendation to the Board by the Public Relations Committee of the Medical Society of the State of Pennsylvania, to an amount not to exceed fifty cents for each member of any such component society whose dues in the State Society are paid April 1 of any current year.—*Pennsylvania Medical Journal*, January, 1932.

Deep Burns Caused by Roentgen Rays.—Deep burns caused by roentgen rays occur much too frequently and the danger of causing such burns should be stressed rather than minimized. The destructive powers of roentgen rays and radium are very great and must be considered as well as their curative powers. There is no question that, therapeutically at least, these agents should be used only by experts and even then with the utmost caution. Early and wide excision of deep burns caused by roentgen rays or radium, with closure of the defect thus made, by tissue shifting, promises more surely than any other method yet devised the elimination of pain, an excellent prospect of permanent healing and in many instances the restoration of function and, in addition, gives a reasonable assurance of safety from subsequent malignant degeneration.—*Journal of American Medical Association*.

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Leaflet Regarding Rules of Publication.—California and Western Medicine has prepared a leaflet explaining its rules regarding publication. This leaflet gives suggestions on the preparation of manuscripts and of illustrations. It is suggested that contributors to this journal write to its office requesting a copy of this leaflet.

EDITORIALS*

DAGEROUS DOLLARS—THE EVIL INFLUENCE OF EXORBITANT FEE CHARGERS

A Former Editorial on This Subject.—In an editorial printed in the January 1926 number of CALIFORNIA AND WESTERN MEDICINE, the late William E. Musgrave, former editor, under the caption "\$ \$ Dangerous Dollars \$ \$," discussed some of the evil effects which result to the prestige of the entire non-sectarian medical profession, through exorbitant charges by a comparatively small number of members of the profession.

* * *

An Experience With a Mid-West Charger.—When the other day the present editor received a copy of an itemized statement, for services rendered by a physician in a moderate sized city in a mid-west state, to an elderly patient to whom he had been called to give treatment for a fractured neck of the femur, the editorial above referred to was recalled.

The bill of the mid-west physician was sent to the Los Angeles representative of the estate of the patient, and because of the seeming size (the entire estate of the deceased patient amounting to about ten thousand dollars), this heir, through an

* Editorials on subjects of scientific and clinical interest, contributed by members of the California Medical Association, are printed in the Medicine Today column, which follows.

attorney, sent the statement to one of the officers of the Los Angeles County Medical Association with request for an opinion thereon. It has been stated to us that

"the attorney made the statement that the bill seemed excessive to him. He had made the proposition to the mid-west attending doctor that the bill be presented to any three men selected by the officer from the Los Angeles County Medical Association, but the mid-west doctor refused this mode of adjustment."

* * *

Why This Specific Case Is Referred To.—This information is here given because in a discussion of professional charges it seems wiser to use as a basis for comment, concrete instances rather than generalized or abstract statements. There may be some who would hold that matters such as these should be taken up only in executive session. In theory such a plan may be good, but in practice it has been found to lead to nowhere.

It is generally admitted that exorbitant fee charging by some members of the medical and dental professions is a something that is nowadays met with, considerably more often than was the case one or two decades ago. The question really comes up as to whether or not one of the reasons for the existence of the present-day larger number of exorbitant fee chargers is not due to the fact that the subject is so nasty and so personal that most physicians desire to remain aloof from official action or contact therewith, even though in discussions with one another they roundly condemn the exorbitant fee chargers who besmirch the profession. When, however, it is realized that the small group of exorbitant fee chargers, more than almost any other factor, have in recent years destroyed much of the reputation formerly possessed by the medical profession for humanitarian and honorable dealing, it naturally follows that aloofness or non-discussion of deplorable exorbitant fee facts will only make matters worse, instead of better.

It is the viewpoint of many physicians that this small number of exorbitant fee chargers who are scattered through the profession have in recent years brought more disgrace to a noble guild than did the shysters or out and out quacks of days gone by, who in that time were supposed to be part of us.

These modern day exorbitant fee chargers conceal their basely commercialistic motives when they apply for membership in our medical organizations; and once in, are usually most unctuous in their personal relationships with colleagues. Thus they use their high pressure salesmanship methods, not only to mulct their patients of money out of proportion to services actually rendered (as based on service charges of fellow practitioners of equal capacity) but they seduce their fellow practitioners into thinking that their characters are far different and more honorable than is actually the case.

If their misdeeds in the way of extortion reacted only upon themselves, then the profession

would have little need to give them further thought. Unfortunately, however, every outrageous example of exorbitant fee charging is passed from lay person to lay person, until even well and kindly thinking members of the lay public are tempted to believe that nearly all members of the medical profession suffer from the same grasping dollar taint; except that some of the profession are more daring than others in the nefarious game. And because the stories of their excessive fees become a topic of general lay and professional conversation, these extortion specialists become powerful agents in seducing recent graduates from the profession's traditions of efficient service at decent compensation, to embark on careers of practice in which the sordidness of base monetary acquisitiveness becomes paramount to the doctrine of real service.

The Concrete Mid-West Case.—Let us go back to the itemized statement of the mid-west physician, a young doctor out of college only some five years or so, who is in general practice and is not an orthopedic or surgeon specialist, and who sent to an elderly woman with a fractured femur (having total means amounting to about ten thousand dollars), a statement for professional services amounting to \$4,900; and who, when requested to modify this bill, as above indicated, refuses to do so. The copy of the statement which we have been given, with deletions of identifying place, is as follows:

October 15, 1930.

To the Estate of	
The	National Bank of
City), Executor	
February 2, 1930.—Physical examination, diagnosis, application of splint, etc.....	\$ 250.00
February 3 1930.—Operation, reduction of fracture, application of body cast, etc.....	1,500.00
February 3 to April 15, 1930.—145 hospital visits, including treatment of fracture and intravenous injection for chronic arthritis, and treatment of ulcers at \$10 per visit (Editor's Note. A period of 70 days).....	1,450.00
March 10, 1930.—Operation, removal of cast, re-application of bivalved cast, curettement of ulcers and treatment of ulcers.....	850.00
April 15 to May 4, 1930.—Forty home visits, including treatment of fracture, intravenous injections for arthritis, treatment of ulcers at \$15.....	600.00
May 4, 1930.—Night house visit, five hours' detention with patient, injection of stimulants, artificial respiration, etc., attempting to save patient from death, at \$50 per hour.....	250.00
Total for professional services rendered.....	\$4,900.00
Paid on account 2/9/30, \$85; 2/17/30, \$35; 2/25, \$35; 3/1, \$35; 3/8, \$35; 3/15, \$35; 3/22, \$35; 3/29, \$15.	
Total paid on account.....	\$ 310.00
Amount due.....	\$4,590.00

Readers of CALIFORNIA AND WESTERN MEDICINE can come to their own conclusions as to the justice of charges such as the above; and can estimate for themselves the effect which publicity of such charges will have in that particular community, in forming lay opinions on the local medical profession's standards of fair dealing.

Some California Cases Cited in a Former Editorial.—We shall leave this subject at this time

by presenting excerpts from the CALIFORNIA AND WESTERN MEDICINE editorial previously referred to, written in the year 1926. What Doctor Musgrave then said, particularly in his last paragraphs, is as pertinent today as when written in that year. The excerpts are as follows:

"... Another successful business man relates his experiences with Doctor A B C, who sent him a bill for \$5000 for a simple uncomplicated operation for removal of the appendix. . . ."

Another victim writes:

"What's getting into you doctors, anyway? You can't all be grafters, but unless you take up and solve some of your problems and, in particular, shear some of the dirty crooks who wear the cloak of your noble calling, it is not difficult to foresee dire consequences. . . ."

"... It seems that a wealthy easterner, an elderly man who came West every winter, went down with pneumonia. A well-known doctor was called in, and he in turn called another doctor in consultation. The old gentleman died. The banker was called upon to make arrangements to take the body back East. The illness lasted about two weeks, and the bill for the first doctor was \$15,000, and the bill of the other was \$5,000. The banker had been instructed to settle all debts, and he went to these doctors and they smiled him out of their offices at the mention of a reduction in the fees. He then went back to them with a compromise offer, of something like \$5,000 and \$1,000. Again he was smiled out of their offices. He then went to a very well known lawyer and said, 'Get these two birds,' and I think they settled on the basis of \$500 and \$250, respectively. . . ."

"... These are isolated instances of panhandling, to be sure, and we have others much worse than these, but difficult to disguise without destroying the point aimed at and too disgraceful to publish, even were it expedient to do so. When our collection of these depressing narratives gets a little larger, we propose to tabulate them for the information of the profession. It seems that the majority, if not all these commercialists, have certain common and obvious characteristics: They are amazingly egocentric, pompous, and invariably severely destructive critics of their own organizations and the 'moss-covered ethics' that their more worthy colleagues love to honor. The most stupid characteristic of these gentry is that they act as if they thought their well-covered heads also made invisible their slimy coats of muck, whereas their doctor acquaintances know them, and more and more of their patients are finding them out.

"Is there a cure for this 'cancer' that is getting a hold upon a humanitarian profession? Of course there is, but it may require some fearless surgical work without too much anesthetic. *We don't want to wash dirty linen in public, but only the sunshine and breezes of the great open places will remove some odors and bleach certain materials.*"

SIXTY-FIRST ANNUAL SESSION OF C. M. A.—AT HOTEL HUNTINGTON, PASADENA MAY 2-5, 1932

Make Your Reservations Now.—The full program of this year's—the sixty-first annual session of the California Medical Association—will be printed in the April number of CALIFORNIA AND

WESTERN MEDICINE. Our 1932 annual session will be held in the commodious Hotel Huntington, which is located in the beautiful Oak Knoll district, overlooking the San Gabriel valley, and at a time—May 2 to 5 inclusive—when the hotel will be practically given over to the sole use of California Medical Association members. If you are planning to attend this annual session, you should make your reservations now. (For rates, see California Medical Association column in this issue, page 200.)

* * *

Advantages and Pleasures of Annual Session Meetings.—The advantages and pleasures to be derived from attendance at the scientific meetings and social functions of California Medical Association annual sessions have been presented year by year. The story, however, never loses its charm to those members who are in the habit of attending, because the anticipations of each year are always more than realized as one sees faces of old friends and grasps the hands of kindly colleagues.

As regards annual sessions, the California Medical Association is more fortunate than most state medical societies, because the very large tourist hotels of our State, at places like San Francisco, Los Angeles, Coronado, Del Monte, Yosemite, and Pasadena permit variation in meeting places year by year, but with always the beneficent and desirable feature whereby the majority of attending members are housed under one roof. Thus good fellowship contacts are made possible that could not be realized under less favorable conditions.

It is hoped that California Medical Association members who register as guests will not be limited to cities and communities far away from Pasadena, but will include also many members of the Association who reside in Los Angeles. If you who read this are skeptical of what is here stated, let us urge you to prove our contentions by being among those who will be found quartered in the Hotel Huntington at Pasadena on May 2-5, next. We are certain you will not regret being in attendance.

C. M. A. DEPARTMENT OF PUBLIC RELATIONS ORGANIZES

Report of the Council's Special Committee.—Among the several resolutions passed by the House of Delegates of the California Medical Association at the sixtieth annual session held at San Francisco in April 1931, was one instructing the Council to organize a Department of Public Relations. The proposed establishment of such a new department made necessary considerable preliminary investigation and planning. In last month's CALIFORNIA AND WESTERN MEDICINE (February issue, page 125, item 29), was printed the report of the Council's special committee, consisting of Doctors Lyell C. Kinney of San Diego, Joseph M. King of Los Angeles, and Karl

L. Schaupp of San Francisco. That report outlined a method of organization for the new department and was adopted by the Council. In accordance therewith, the Advisory Committee to the department came into being. The Advisory Committee consists of certain officers and committeemen of the Association who hold office in the department, ex-officio. (The roster of the Advisory Committee is printed in the CALIFORNIA AND WESTERN MEDICINE directory, advertising page 2.) After this was done, the Council and the Advisory Committee looked about for a good director or executive secretary of the department. The Council's choice finally fell on Dr. Walter M. Dickie, former director of the California State Board of Health. During the last month Doctor Dickie has been busy laying the ground plan for the work of the department. (See, also, in this issue, page 201.)

* * *

The Scope and Work of the New Department. Sections 1 to 4 of the above special committee report indicate the general scope and aims of the department. Because of the importance of this new activity of the California Medical Association, these four sections may well be here reprinted, so that all members may have a good orientation of what is contemplated. These sections are as follows:

Resolved, That the structure and function of the Department of the Public Relations be as follows:

1. The function of the department shall be to promote the leadership of the medical profession in public health activities, public health education, legislation dealing with public health and medicine, and in the distribution of adequate medical care.
2. The actions, policy and budget of the department shall be authorized by and subject to the approval of the Council of the California Medical Association, or of the Executive Committee under authorization of the Council.
3. The director of the department shall also have the title of "executive secretary" as provided by the Constitution of the California Medical Association. He shall be appointed annually by the Council at its reorganization meeting and his salary and duties shall be fixed by the Council. He shall be a graduate doctor of medicine, but need not necessarily be a member of the California Medical Association.
4. The director shall, with the coöperation of the Advisory Committee, assist the component committees of the department in carrying out their respective duties as designated in the Constitution of the California Medical Association or as defined by the House of Delegates or Council.

It is planned in subsequent issues of CALIFORNIA AND WESTERN MEDICINE to maintain a regular Department of Public Relations column, which will give progress reports on work in hand for the information of members of the Association.

In the meantime, every member who is interested and who has suggestions to offer, is cordially invited to send the same to the California Medical Association Department of Public Relations, care of Dr. Walter M. Dickie, Room 2039, Four Fifty Sutter Building, San Francisco. Such coöperation will be much appreciated.

CALIFORNIA STATE MEDICAL LIBRARY

Advisory Board Meets and Organizes.—Not to make the subject tiresome through continued reference, but because it is of real importance to those physicians who desire to keep themselves in touch with the latest literature concerning diseases and medical experiences in which they are especially interested, the California State Medical Library is again mentioned in these columns.

Assembly Bill 477 passed the California Assembly on May 5, 1931, the California Senate on May 14, 1931, and was approved by Governor James J. Rolph on June 9, 1931. The sum of \$42,175.96 was transferred from the contingent fund of the Board of Medical Examiners of the State of California to the regents of the University of California on December 28, 1931.

The Advisory Board, consisting of the presidents of the University of California, of the California Board of Medical Examiners and the California State Board of Health and the deans of the Medical School of the University of California and of the Los Angeles Medical Department, University of California, on call by President Robert Sproul of the State University met at San Francisco on February 16, 1932, to discuss best ways and means of organization. President Robert Sproul of Berkeley was elected chairman of the Advisory Board, Dr. George H. Kress of Los Angeles, vice-chairman, and Dr. Langley Porter of San Francisco, secretary. A budget and tentative program of procedure were agreed upon, the recommendations to be transmitted to the regents of the University by President Sproul. Through the annual directory of the California Board of Medical Examiners, a copy of which is sent to every licensed physician in California, and through CALIFORNIA AND WESTERN MEDICINE, it is hoped to acquaint all members of the California Medical Association concerning the scope of the packet library service it is planned to inaugurate, and the manner in which the same may be utilized by physicians in all parts of the State.

Present Plans.—For the time being, reading rooms will not be established, since these already exist in the medical libraries at San Francisco and Los Angeles. It is hoped, however, to make possible an efficient packet library service that will be available to every licensed physician and surgeon of California. Owing to the somewhat limited initial appropriation for organization and maintenance, it will be necessary to proceed with caution in order to avoid future financial pitfalls. However, it is felt that with increasing experience and contacts in this state medical library packet service, the work performed will be of such nature as to insure a permanent place for the institution in the good will and coöperation of the medical profession of California. After the regents of the University have passed on the recommendations which will be submitted by President Sproul, further reports will be given in CALIFORNIA AND WESTERN MEDICINE.

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA

California Medical Association has Sponsored All Licensure Laws for the Protection of the Public From Incompetents.—California's first Medical Practice Act became a law in the year 1878. It was sponsored by our state medical organization which at that time had the name, Medical Society of the State of California. During all the intervening years of this last half-century, it has been the California Medical Association that has sponsored the basic licensure laws that have found a place on the statute books of California. During this period the members of the different boards of medical examiners, almost without exception, have also been members of the California Medical Association.

The complex situations which have arisen in California healing art licensure during the last two decades or so, because of the advent of multiple cultist boards, have been commented upon in these columns from time to time in the past. The subject is a live one, intimately connected with medical standards and interests, and no doubt will continue to be discussed during all the years to come.

* * *

Requisites of a Good Examining Board.—A medical examining board that functions efficiently must not only be composed of members who possess proper academic and clinical experience backgrounds, but its members must be exemplars of integrity, and also be efficient, loyal and, one might add, altruistic public servants.

The key-men on an examining board are the president and the executive secretary. The first not only to preside at meetings, but to know the licensure laws, and when the board acts as a court, to function as a fair and honest judge; and the secretary-treasurer to so keep the records of applicants and of licentiates that such data will give an accurate portrayal of essential scholastic and other facts concerning all who have or who aspire to receive licenses to practice medicine and surgery.

* * *

Reappointment of Doctors Percy T. Phillips and Charles B. Pinkham.—The people and the medical profession of the State of California have been fortunate in having had as members, and respectively as president and secretary of the examining board for a period of almost twenty successive years, Dr. Percy T. Phillips of Santa Cruz and Dr. Charles B. Pinkham of San Francisco.

The terms of these two members recently expired. The California League for the Preservation of Professional Rights and other organizations deemed it wise to request all county medical societies of California to pass resolutions calling the attention of Governor Rolph to the desirability of reappointing these two faithful public servants.

It is a pleasure to be able to announce that Governor James Rolph has made such appointments. It may therefore be taken for granted that Doctors Percy T. Phillips and Charles B. Pinkham, with the aid of their fellow members, will continue to carry on and forward the important work of protection of the health interests of the citizens of California.

CALIFORNIA STATE DEPARTMENT OF PUBLIC HEALTH

New Appointments to the Board.—Newspaper dispatches of February 13 chronicled the appointment of the following new members to the State Board of Health: Dr. John H. Graves of San Francisco, Dr. Edward M. Pallette of Los Angeles, Dr. Gifford L. Sobey of Paso Robles, and Dr. Junius B. Harris of Sacramento. The above names direct attention to the fact that on the State Health Board as now constituted are several colleagues who long have been identified with the work of organized medicine in California. Thus may be mentioned: Dr. John H. Graves, who was president of the California Medical Association in 1924 and is now vice-speaker of its House of Delegates; Dr. Junius B. Harris of Sacramento, who is the present president of the California Medical Association; and Dr. Edward M. Pallette of Los Angeles, who is the present speaker of the House of Delegates of the California Medical Association. In the reorganization of the board, Doctor Graves was elected president and Doctor Pallette, vice-president.

* * *

Intricate Problems of Modern Public Health Work.—As these colleagues take up their new duties on the State Health Board, CALIFORNIA AND WESTERN MEDICINE extends to each its best wishes for a career of public service that shall be recorded as having been well done. At the same time appreciation for past labors is expressed to the former members of the board, who, through the exigencies inherent in political changes, have been retired.

There is much public health work to be done in California. Thorough knowledge and clear thinking is necessary in the solution of many of the intricate public health problems which today face practically every community in California. The past contacts of the new members of this important state board warrant the belief that they will study problems carefully from all angles, and properly evaluate policies. It is gratifying to know that Governor James Rolph has appointed men to this important board who possess in such large measure the confidence and good will of the medical profession of our State.

Report of the Committee on Educational Policies of the Association of American Medical Colleges.—During the past year the Committee on Educational Policies has continued its study of graduate medical education. Through the cooperation of the National Board of Medical Examiners the Committee has had opportunity to confer with representatives from most of the national group of specialists. In addition to

such conferences, we have had considerable correspondence with groups and individuals interested in graduate study.

The Committee recommends the following basic fundamental requirements for preparation for the practice of the specialties:

1. Graduation from a recognized medical college.
2. One year's internship which should involve general clinical work. This should preferably be a rotating internship or one in which general diagnosis and general treatment are stressed.
3. Residency, which might be in a broad special department, such as medicine, surgery, gynecology and obstetrics. This residency might consist of an assistantship in preclinical departments, such as pathology, physiology, etc. In lieu of the residency, the requirement might be three years' experience under supervision or five years' general practice.
4. Not less than two years graduate clinical work under supervision of a university. The candidate in addition should be required to take sufficient training to attain a superior knowledge in the fundamentals which underlie diagnosis and treatment in his clinical field. The departments with which he has worked shall certify that in their opinion the candidate is competent to begin the practice of his specialty in a scientific manner without supervision. The candidate may then present himself for an adequate examination by the university.

The candidate should receive adequate recognition of his attainment from the university.

It is recommended that a copy of these recommendations be sent to the various medical colleges with the suggestion that they survey their resources and facilities in order to provide increased opportunities for graduate training as above outlined.

(Signed) L. B. Wilson, E. S. Ryerson, John Wyc-koff, F. T. Van Beuren, Jr., H. G. Weiskotten, Chairman.—*Journal of the Association of American Medical Colleges.*

A Governor Looks at Chiropractic.—Governor Buck of Delaware has returned to the legislature, without his approval, a bill to create a board of chiropractic examiners and to regulate the practice of chiropractic. His summarization of the reasons for his veto is so clear and terse that it should be read by the legislators and governors of every state that is threatened or already afflicted with this cult. His statement follows:

"The purpose of the act, as I understand it, is to legalize the practice of chiropractic in this state. Practitioners of this cult are not recognized now. Do they profess to be doctors in the same sense of the term as is commonly understood to apply to men and women of the medical profession? In so far as I am able to determine, there is not a recognized medical school in the country that includes in its curriculum a course in chiropractic. This fact in itself seems singularly significant.

"Even to the lay mind the idea that all disease of whatever character is due to spinal displacements of a mild sort, and that cures of such ailments as tuberculosis, smallpox, diphtheria, scarlet fever and others can be effected by manipulation and fingering of the spine is preposterous.

"Before returning this bill to you I have satisfied myself that the training and education a chiropractor, or drugless healer, needs to practice his art does not fit him properly to advisedly treat the sick, inasmuch as he is not qualified to diagnose ailments nor recognize communicable diseases and to take measures to control them. He is, therefore, an opponent to the department of health.

"Wherefore, it seems to me it would be inconsistent for the legislature to appropriate, as it will do, money for the state board of health, which board is trying to eradicate communicable disease, and at the same time legalize the practice of a cult which does not believe in the germ theory of a disease but does teach and believe that such diseases as scarlet fever, etc., are due to a distracted vertebra and the method to prevent and cure such disease is to see that everybody has a normal spine."—*Journal A. M. A.*

MEDICINE TODAY

This department of California and Western Medicine presents editorial comment by contributing members on items of medical progress, science and practice, and on topics from recent medical books or journals. An invitation is extended to every member of the California, Nevada and Utah Medical Associations to submit brief editorial discussions suitable for publication in this department. No presentation should be over five hundred words in length.

Insomnia in Nervous and Mental Diseases.—

Insomnia is one of the most common conditions we are called upon to treat. A symptom not a disease, insomnia may indicate much or little. As with any symptom, its presence must be accounted for. Resulting from mental and physical irritation, it is found associated with organic or functional disease, but is not pathognomonic of any one disease. Intelligent therapy must start with an accurate diagnosis of the underlying condition of which the insomnia is the surface indication. Should organic disease be found, therapy should be directed toward that condition, the insomnia treated symptomatically.

If a thorough search eliminates organic disease as a factor, one is justified in relating insomnia to a psychoneurosis or so-called functional disorder. One must go further than merely labeling the condition. The recognition of the emotional factors responsible for the psychoneurosis is essential in eliminating the end product—insomnia. Drug treatment of this type of insomnia often results in further trouble, for the patients of this group are extremely liable to form hypnotic drug habits. Nervous insomnia is not just sleeplessness, but sleeplessness on which fear and apprehension have been engrafted. Analysis of the cause of the psychoneurosis with reëducation of the patient mentally and physically, is the only legitimate and satisfactory method of cure. During the reëducational treatment, symptomatic use of hypnotics is permissible as a means to an end. The patient should not be discharged until he is sleeping well independently of medication.

There is a group of cases which are not organic in the sense that no pathologic changes are demonstrable and are not functional in the sense that they never become normal. In this group, which we call constitutional psychopathic individuals, are to be found the most intractable cases of insomnia and the greatest incidence of hypnotic drug habits. These patients are therapeutically impossible of cure, as is indicated by their name—constitutional psychopaths. The best the physician can hope for, as a rule, is temporary improvement. He must be careful that he does not leave his patients worse than before treatment by perhaps acquainting them with the temporary ease and satisfaction obtained by habit-forming drugs. Briefly, as we are and as our days are, so will our nights be.

H. DOUGLAS EATON, Los Angeles.

Experimental Scarlet Fever in Children.—

Although the Dicks¹ allege the reproduction of scarlet fever in human volunteers by throat inoculations with hemolytic streptococci, the symptoms developed in the adult medical student used in their inoculation tests were so meager and so inconstant that Doctor Toyoda and his colleagues² of Darien, Manchuria, doubt if the Dicks have actually reproduced this infection. The Japanese investigators concluded that it was essential for them to produce "genuine scarlet fever" by human inoculations before they were justified in assuming that the Dick streptococcus is the causative agent of this disease. With a disregard for human life that is impossible in the Western world, the oriental investigators selected a dozen or more Dick-toxin-susceptible children, from three to seven years of age, and swabbed their throats with streptococci isolated from typical cases of scarlet fever. They allege the reproduction of typical scarlet fever of marked severity in these toxin-susceptible children, with subsequent typical alterations in skin reactivity (Dick reaction, Schultz-Charlton phenomenon), but fortunately with no fatalities.

The results of greatest interest, however, of these oriental observers are their comparisons of the relative infectivity of the various strains of hemolytic streptococci thus far tested by them. The first or "old strain" of Dick streptococcus had been cultivated for 150 generations in artificial culture media. This strain produced Dick-toxin in abundance, but gave no suggestion of scarlet fever in the five children inoculated with it. Two recently isolated strains, however, both produced typical scarlet fever, although their toxin production was not greater than that of the "old" culture. The "old" and "new" strains, however, did differ in infectivity for laboratory animals. The old culture required ten to fifty times the new culture M. L. D. to kill mice. The Japanese experimenters conclude from these tests that one of the essential factors in the etiology of scarlet fever is this high infectivity, which must supplement the power to produce Dick-toxin, in order to reproduce the disease.

W. H. MANWARING, Stanford University.

¹ Dick, G. H., and Dick, G. F.: J. A. M. A., 81:1166, 1923.

² Toyoda, T., Futagi, Y., and Okamoto, M.: J. Infect. Dis., 40:350, (April) 1931.

STATE MEDICAL ASSOCIATIONS

CALIFORNIA MEDICAL ASSOCIATION*

JUNIUS B. HARRIS.....President
JOSEPH M. KING.....President-Elect
EMMA W. POPE.....Secretary

OFFICIAL NOTICE

Hotel Huntington

Rates for Annual Session, May 2-5, 1932

American Plan only.—All rooms with bath:

Double room, \$7 each person.

Two singles (connecting), \$8 each person.

Single room, \$9 each person.

Early reservation is advisable. Address Hotel Huntington, Pasadena.

DEPARTMENT OF PUBLIC RELATIONS OF THE CALIFORNIA MEDICAL ASSOCIATION

Progressive Medicine as It Is Practiced in California †

With this issue of CALIFORNIA AND WESTERN MEDICINE, a new column is started under the caption "Department of Public Relations of the California Medical Association." Until such time as fact-finding investigations of special California problems reach a point of completion to warrant special comment, it may be necessary to print here matter of a general nature which has a bearing on the aims of this department. (See editorial in this issue, page 197.) With that thought in mind, a recent article by Michael M. Davis, Ph.D., director for medical services of the Julius Rosenwald Fund of Chicago, is here reprinted.

When Doctor Davis visited California last year he had numerous meetings with members of the medical profession throughout the State. Because of his official connections, his authorship of books and broad knowledge of efforts in group medicine, his comments on his California observations are reprinted below. Coming from a visitor to California, the views of Davis should be of more or less interest to California physicians.

* * *

During a visit in the late spring to San Francisco and Los Angeles, I had the opportunity to meet individually and in groups a considerable number of physicians. From officials of medical societies, from members of university medical faculties, from practitioners in various branches, I received an almost uniform impression that they and the medical profession in

California as a whole are looking forward with open minds to impending changes in the practice of medicine and are endeavoring to make constructive plans that will enable physicians to take the leadership in these changes.

One outstanding problem faced by the medical profession in California is the recent though growing prevalence of the system of paying for medical service on an annual basis. This is regarded as a form of voluntary sickness insurance. Certain large industrial enterprises, notably the Southern Pacific Railway Company, have established systems of medical service for their employees, largely supported by regular weekly or monthly contributions from the beneficiaries, and it is probably because of the prominence and success of these industrial enterprises in sickness insurance that the idea of obtaining medical service in return for an agreed annual payment has become familiar to the population at large. Aside from examples in railway, mining and public utility corporations, the tendency is spreading in other industries, the California and Hawaiian Sugar Corporation and the General Controlling Corporation being among the large companies that are this year establishing similar services. . . .

That this idea has not only become prevalent among the employees and officers of large establishments is shown by the existence of numerous organizations, usually known as "hospital and health associations" or by some similar title, which "sell medical service" to individuals for \$1.50 to \$2.50 a month. The law in California, or its present interpretation, appears to regard such arrangements as service contracts and not as insurance. Hence, these hospital and health associations are not under the supervision of the state insurance department and do not have to comply with regulations concerning financial stability, such as would safeguard regular insurance enterprises. The consequences seem to have been unfortunate for many of those who have purchased such services. Contracts, in some instances at least, seem to be so drawn as to carry a good many exceptions in fine print so that what the purchaser thinks he is going to get will not be forthcoming when he asks for certain medical care during his illness.

Some of these organizations, however, have been in existence for ten years or more, which means that they must have given satisfactory service to their clients. On the other hand, there are fly-by-night concerns that make money on selling insurance rather than by giving service. But the striking thing is that a large section of the public is so imbued with the idea of buying medical service in this way that such "insurance" is salable. These associations engage one or more individual physicians to supply the medical care, an arrangement that tends toward buying such service at a cheap rate and of poor quality.

HOW ONE ASSOCIATION FUNCTIONS

Some of these associations are indeed owned and operated by physicians, others apparently by laymen. One was found which, while it was nominally a lay corporation, was actually in the control of three physicians who owned the majority of the stock, the two laymen concerned being mere dummies. This organization presented the entertaining spectacle of the

* For a complete list of general officers, of standing committees, of section officers, and of executive officers of the component county societies, see index reference on the front cover, under Miscellany.

† Reprint of an article in "The Modern Hospital," December 1931, Vol. 37, No. 6. By Michael M. Davis, Ph.D., Director for Medical Services, Julius Rosenwald Fund, Chicago.

controlling physicians making contracts in their corporate capacity with themselves in their individual capacity as practitioners, to provide medical service to clients of the organization. Other physicians were also employed. Of course the physicians in every case retained their legal responsibility as practitioners for the medical care of their cases. Here is a nice question for the legal mind: Is such an organization a corporation practicing medicine?

LOS ANGELES COUNTY MEDICAL ASSOCIATION AND THE
METROPOLITAN WATER BOARD

The constructive efforts of the medical profession of California are illustrated by the recently published plan of the Los Angeles County Medical Society, under which the society has agreed with the employees of the Metropolitan Water District of Los Angeles, in return for a fixed monthly payment from each member, to provide home or office care at agreed rates on a fixed published schedule, which is specified also for laboratory service, surgical operations and for hospital care. The monthly payment for each employee is to be \$1.50 to start with, with the expectation that this may have to be revised as the result of experience. The individual employee has the free choice of physicians among all the members of the medical society, but no individual physician is obligated to give service under these conditions unless he chooses to do so.

In an editorial in the June 18, 1931, bulletin of the society, the following comment is made on this plan:

"The working out of the basis of the cooperation with the Metropolitan Water District has given an opportunity to put into effect a trial of the practice of medicine on a group purchase plan basis, which allows all members of the Los Angeles County Medical Association to participate, instead of limiting the work to a small group. In the conferences between the special committee handling this matter and the representatives of the Metropolitan Water District, it has been distinctly understood that the plan as printed in this issue of the bulletin is an experimental one, and it is hoped that every member of the association will give whole-hearted cooperation in this effort to establish definite facts, so that we may avail ourselves of the accumulated knowledge for future contacts with various public and private organizations employing large groups of persons with a low earning capacity. It is understood that each member will give the best of his services and refrain from building up the fees unnecessarily, and in the event that proper treatment cannot be given on the basis of the fee schedule as arranged, adjustments will be made by the Metropolitan Water District and this committee.

"After a sufficient time has elapsed to have proved or disproved the correctness of this plan, a committee representative of the association will act as arbitrator in cases where inequity is thought to exist between the doctor, the patient and the Metropolitan Water District. This entire plan was read to the council at its last meeting and was unanimously approved and a vote of appreciation given to the committee for the manner in which this contract has been worked out. It is the hope of the council and of your officers that the membership as a whole will reciprocate with the Metropolitan Water District, as this appears to be a step forward in the solution of the much discussed problem of state medicine."

COMBATING THE SECTS AND HEALERS

California physicians face one difficulty more than those of any other state—the sects and the healers. If one opens the classified telephone directory in Los Angeles, one finds something that I have seen

in no other city in the United States. Under the heading, "Physicians and Surgeons," there appear as sub-headings, "chiropractic physicians," "osteopathic physicians," "naturopathic physicians," each in alphabetical order, and (save the mark!) "medical doctors," under which heading the licensed practitioners with the degree of M. D. are found. One of the deans of the profession in Southern California said to me, "We have had no success whatever in combating the sectarian practitioners and the healers. When we have fought them, the citizens of the state have backed them up, even by referendum. They have sometimes capitalized our opposition in order to win support for themselves as underdogs. How can we deal with this problem?"

The constructive method of dealing with it has already been illustrated by the attempt to supply service of a quality that will insure satisfactory results through a system and amount of payment that will satisfy the client financially. It is significant that the California State Medical Society is grappling with this problem constructively, illustrating in a larger way what the county society is attempting. Through a committee officially appointed by the state society, a plan is being worked out for demonstrating how medical services can be supplied to a considerable area, such as a county, at an agreed annual sum per person, and with a specified schedule of rates for the various forms of medical service. As an officer of the society said to me, "The citizens of California are demanding something. If we of the medical profession do not meet the demand, lay groups will take away from us the power of initiative."

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Next month additional matter of current interest will be given. At the annual session to be held at Pasadena on May 2-5, it is hoped to bring in a tentative progress report. In the meantime, suggestions from members will be gladly received.

WALTER M. DICKIE, M. D.,

Director of Department.

Room 2039, Four Fifty Sutter, San Francisco.

CANCER COMMISSION OF THE
CALIFORNIA MEDICAL
ASSOCIATION

Program for Pasadena Meeting.—Attractive features of the cancer field are in preparation for the California Medical Association meeting in Pasadena, May 2-6. As announced in this column in January, the California Medical Association Council has invited as one of the guest speakers Dr. Robert B. Greenough of the Harvard Cancer Commission and Cancer Committee of the American College of Surgeons. Doctor Greenough will speak on "What the Medical Profession Can Do to Reduce Cancer Mortality." Following his address the Cancer Commission will offer a report of its activity during its first year of work.

Following the first general session on Monday, a luncheon will be arranged for members of all the Cancer Commission committees and others interested, at which plans for the work of the ensuing year will be discussed.

On the second day of the convention, the section of which Dr. S. H. Mentzer is secretary plans a symposium on a number of interesting surgical aspects of cancer. In addition, the Section on Pathology will devote its Wednesday morning session to a round-table conference on cancer, a paper being read on "The Relation of Chronic Cystic Mastitis to Cancer of

the Breast," with Doctor Greenough participating in the discussion.

Directed by the Pathology section leader, Dr. Z. E. Bolin, and Dr. Newton Evans of Los Angeles, the Commission is at work on arrangements for a special microscopic pathology conference planned for the pathologists attending the convention—this to be held on Sunday, May 1, at the White Memorial Hospital in Los Angeles. Detailed arrangements will be announced later.

California Conference of Social Work.—The California Conference of Social Work has appointed a special Committee on Cancer and offered its cooperation to the Cancer Commission of the California Medical Association. This committee consists of: Walter M. Dickie, M. D., of Berkeley, Chairman; Ruth Cooper, Director of Social Service, Los Angeles County General Hospital; N. Florence Cummings, Director of Social Service, Stanford Hospital, San Francisco; William R. Dorr, M. D., Superintendent of Riverside County Hospital, Arlington; and Margaret L. Spiers, Berkeley Health Center. The social service problem in the control of cancer will be given special attention through this committee's activities at a conference to be held in Riverside during the first week of May.

Extension Committee.—Cancer programs were given under the auspices of the Cancer Commission before the San Joaquin County Medical Society on December 10, 1931, before the Fresno Society on February 2, and before the Tulare Society on February 28. A similar program is being planned for a joint meeting of the Stanislaus, Merced, and Tuolumne County Medical Societies.

In Southern California the Glendale Branch of the Los Angeles County Medical Society turned over its meeting of February 15 to a team of men representing the Cancer Commission. Requests have come in from the Pasadena and Santa Monica Branches for evening programs in the immediate future.

The following county societies have been visited with the district councilors and plans of the Cancer Commission presented by a member either of the Commission or of the Extension Committee: Northern District Medical Society, October 13, 1931; Napa, November 4; Sonoma, November 12; Monterey, February 5, and Santa Clara, February 17.

THE WOMAN'S AUXILIARY OF THE CALIFORNIA MEDICAL ASSOCIATION*

Official Notice

The state board of the Woman's Auxiliary is offering prizes of \$25, \$15, and \$5 for the three best papers on "Educating a Doctor's Wife." This contest is open to any doctor in California who is in good standing in the state society, his wife, and children. Maximum number of words is 500; minimum number, 200. Papers should be sent to Mrs. W. H. Sargent, 109 Beechwood Drive, Oakland, not later than March 31, 1932. The names of the judges will be announced in CALIFORNIA AND WESTERN MEDICINE. The winning papers will be read at the annual session of the California Medical Association Woman's Auxiliary in Pasadena the first week of May.

*As county auxiliaries to the Woman's Auxiliary of the California Medical Association are formed, the names of their officers should be forwarded to Mrs. Louis H. Dyke, chairman of Publicity and Publications Committee, 6008 Rose Street, Oakland. Brief reports of county auxiliary meetings will be welcomed by Mrs. Dyke and must be sent to her before publication takes place in this column. For lists of state and county officers, see advertising page 6. The Council of the California Medical Association has instructed the editors to allocate one page in every issue for Woman's Auxiliary notes.

A meeting of the state board of the Woman's Auxiliary to the California Medical Association was held on February 6 in Santa Barbara at the Hotel Vista Mar Monte.

Mrs. Doane gave an interesting report on the auxiliary program for the state convention in May. This program will be announced in the April number. The auxiliaries are urged to send as many members as possible to the convention since many delightful events are being planned for their entertainment.

The members of the Santa Barbara Auxiliary entertained the members of the state board at a delightful tea immediately following the business meeting. The tea was held in the Hotel Samarkand and Mrs. Henry J. Profant, the president, who is a pianist of note, entertained the guests with some delightful numbers. The guests also enjoyed the gardens of the hotel, some of the most beautiful in the city of Santa Barbara.

The following members of the board were present: Mrs. William H. Sargent, president; Mrs. F. E. Coulter, president-elect; Mrs. C. Stevens, first vice-president; Mrs. S. W. Weil, second vice-president; Mrs. M. Harding, recording secretary; Mrs. A. R. Alexander, corresponding secretary; Mrs. C. J. Teass, treasurer; and councilors Mesdames J. B. Barrows, W. L. Blodgett, F. E. Clough, P. S. Doane, L. H. Dyke, A. M. Henderson, C. P. Proudfoot, and L. C. Kinney.

Component County Auxiliaries

Contra Costa County.—The Woman's Auxiliary to the Contra Costa Medical Society were entertained at their regular meeting at the home of Mrs. C. R. Blake, president, on January 12. The state president, Mrs. W. S. Sargent was the guest of honor. Mrs. Sargent outlined the program for the coming year and explained the essay contest which is now being sponsored by the state board.

Mrs. L. A. Hedges was appointed county hygiene chairman and Mrs. U. S. Abbott, chairman of the Speakers' Bureau. At the request of Doctor Church, the county health officer, Mrs. S. N. Weil and Mrs. J. N. McCullough were appointed to study the status of milk inspection throughout the county. These members will confer with Doctor Church and endeavor to offer constructive suggestions.

A delightful luncheon was served by Mrs. Blake, following the business session.

Santa Barbara Auxiliary.—The regular meeting of the Woman's Auxiliary to the Santa Barbara Medical Society was held in the staff room of the St. Francis Hospital December 14, with the president, Mrs. H. J. Profant, presiding. There were thirteen members present.

Dr. F. J. Nuzum's talk on "Research Problems of the Cottage Hospital Laboratory" proved very interesting.

Mrs. Profant read a note from Dr. W. E. Johnson thanking the auxiliary for its expression of sympathy in his recent bereavement.

The next meeting being the annual meeting and election of officers, the president appointed on the Nominating Committee Mrs. Mellinger, chairman, assisted by Mrs. Blaisdell and Mrs. Freidall.

Our state president, Mrs. W. H. Sargent, spoke on the aims and purposes of the auxiliary. The auxiliary provides a medium between doctors and laity, and creates a better understanding between the doctors and their families. She urged that the magazine *Hygeia* be placed in public schools and other public places. The president appointed Mrs. R. F. Atsatt as chairman of the activity.

Following a general discussion refreshments were served by Mesdames Henderson, Roome, and Mellinger, and a social time was enjoyed.

The annual meeting of the Woman's Auxiliary to the Santa Barbara County Medical Society was held in the St. Francis Room of Del Paseo, Monday evening, January 11, with a delicious dinner preceding the business session. Fourteen members and one guest were present: Mrs. Profant, president, presiding.

Immediately following the dinner, Dr. Emily O. Lamb spoke on "The Need for a Child Guidance Clinic in Santa Barbara."

The treasurer's report was read and accepted. Receipts for the year were \$90 and disbursements, \$46.72; leaving a balance on hand of \$43.28.

The secretary gave the annual report of the year's activities.

Officers for the year 1931: Mrs. H. J. Profant, president; Mrs. H. F. Freidell, first vice-president; Mrs. C. S. Stevens, second vice-president; Mrs. W. H. Eaton, secretary-treasurer.

Six regular meetings were held during the year and one social evening at the home of the president. Two meetings were canceled and the members voted to adjourn during the three summer months.

The programs have been educational and social, with musical programs at several of the meetings. Reports of the delegates to the state convention were given at one meeting. The average attendance at meetings was twelve.

Contribution made to the Drought Relief Fund was later returned. The auxiliary assisted at a tea given at St. Francis Hospital on Hospital Day.

There are twenty-four paid-up members.

Following the reading of these reports the nominating committee presented the following names for election to office for the ensuing year, and the following officers were elected: Mrs. W. H. Eaton, president; Mrs. R. F. Atsatt, vice-president; Mrs. K. F. Wilson, secretary; Mrs. F. E. Blaisdell, Jr., treasurer.

The following article is from the resolution passed by the House of Delegates, Oregon State Medical Society, October 24, 1931:

Whereas, The Woman's Auxiliary has made notable progress during the past year in organizing the wives of physicians and interesting them in the dissemination of sound health information to the lay public, particularly in their various local clubs; and

Whereas, The aid of the auxiliary is indispensable in the promulgation of such knowledge and assisting the medical profession in the work of educating lay people to the great truths of scientific medicine; therefore be it

Resolved, That the House of Delegates of the Oregon State Medical Society express to the Woman's Auxiliary its deep appreciation of their invaluable services and pledge its whole-hearted support to their future program.

COMPONENT COUNTY SOCIETIES

CONTRA COSTA COUNTY

The February meeting of the Contra Costa County Medical Society was held on Tuesday evening, February 9, at the nurses' home of the County Hospital at Martinez.

The meeting was called to order by the president, Dr. S. N. Weil of Rodeo. A letter was presented from Mrs. L. H. Fraser, secretary of the Woman's Auxiliary, explaining the details of a proposed contest on "Educating a Doctor's Wife." A very gracious note of thanks was read from Dr. C. L. Abbott, in appreciation of his having been elected an honorary member of our local society.

Under new business, application for membership was presented from Dr. Selby Marks of Pittsburg. It was regularly moved and seconded that he be ac-

cepted into membership, and the motion was carried unanimously.

Two technicians from the Petrolagar Laboratories showed motion pictures, one on appendectomy, the other on the anatomy of the abdominal wall. The films were very well received, showing that an interesting review of some of the basic principles is welcome. Our guests of the evening, Dr. Montague Woolf and Dr. James Morgan of San Francisco, gave a most comprehensive talk on "The Modern Treatment of Cancer of the Rectum." They presented an instructive film of the Miles abdominoperineal excision of the rectum, made in London, and the only one of its kind in the United States.

Guests who attended other than the speakers, Dr. Woolf and Dr. Morgan of San Francisco, were: Dr. Dick and Dr. Burke of Oakland, Mrs. Merry of Berkeley, Dr. Morken of Martinez, Dr. Kearns of Pittsburg, and Dr. Edmeads of Concord. Members present were: Doctors Ford, J. W. Bumgarner, Fraser, Harmon, Daily, and Clara Spalding of Richmond; Neufeld of Bay Point, Rowell and McCullough of Crockett, Beard and Sweetser of Martinez, Knorr of Concord, Weil of Rodeo, Stauffer and Marks of Pittsburg.

CLARA H. SPALDING, Secretary.

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FRESNO COUNTY

The regular meeting of the Fresno County Medical Society was held at Hotel Fresno on February 2, dinner being served at 7 p. m. There was a very fine attendance at this meeting, about fifty members being present.

The application for transfer of membership of Dr. Giuseppe Vercellini from Los Angeles County to Fresno County was read and accepted on motion of Dr. C. O. Mitchell, seconded by Doctor Tillman. On payment of regular annual dues, Dr. G. Vercellini will become an active member of the Fresno County Medical Society.

The police department medical plan of having an open panel on industrial fee basis was brought before the society and left for further consideration until our next regular meeting.

Announcement was made of the acceptance by the board of governors of an invitation by Dr. E. R. Morris for the society to meet at Wish-I-Ah Sanitarium for their April meeting, with a complimentary dinner, thus giving the members two months in which to make arrangements to attend this meeting. The topic for the evening's discussion, pulmonary tuberculosis, will be programmed by Dr. E. R. Morris.

Dr. J. S. Munch, the consultant pharmacologist and toxicologist for the United States Department of Agriculture, also the consultant pharmacologist for Sharpe & Dohme, who was in Fresno in an advisory capacity in regard to the cases of thallium poisoning at the General Hospital, gave a short discussion on thallium poisoning.

This was followed by the clinical program of the evening. Objectives, organization, and program of the California Medical Association Cancer Commission was explained by Dr. C. A. Dukes of Oakland, chairman.

Dr. Z. E. Bolin of San Francisco gave an excellent discussion, demonstrating with lantern slides the pathology of breast cancer. Any infiltrating growth with no capsule is practically always cancer. Methods of spread by lymphatics and infiltration were shown.

Dr. A. R. Kilgore of San Francisco gave a most helpful symposium on the proper methods of physical examination of the breast and exploration and technique of radical operation for breast cancer, which was illustrated and explained in detail by use of lantern slides.

Dr. R. S. Stone of San Francisco discussed radiotherapy of breast cancer, as to when it should be used as a preoperative measure, also postoperative, as well as the proper dosage and advantages of both.

The meeting adjourned with all present feeling that a most profitable evening had been spent.

The meeting of the board of governors was held at Hotel Fresno at 6:15 p. m., preceding the regular dinner meeting.

A letter from Curtis Publishing Company was read in regard to an article to appear in *The Ladies Home Journal*, entitled "Saver of Mothers" in which a better prenatal care for mothers is insisted upon, urging pregnant women to report to their family physician early in pregnancy in order to get better care and thereby reduce the mortality rate in childbirth. The board voted to endorse this article and instructed the president to take care of this matter.

The matter of an entirely open panel on an industrial basis fee schedule for the police department, for sickness only, among their members was brought before the board and discussed. The plan being that each member of the police department fund could call their own family physician in case of sickness and the fund would pay the physician and hospital and industrial rates for services rendered. It was decided to also bring this matter before the society at the next succeeding meeting.

The American Red Cross, Fresno chapter, asked for a consultation committee to help them in their work in the child welfare clinics of the city. This was referred to the president, to be taken up with the four pediatricians of this city.

The president appointed a committee from the society to meet with the county committee, appointed by Doctor Morris, to discuss measures for putting on a campaign for the enlightenment of people as regards early diagnosis of pulmonary tuberculosis and proper care. Those appointed were: Doctors Dau, Jorgensen, and Sciaroni.

An invitation was extended to the Fresno County Medical Society to have their April meeting at Wish-I-Ah Sanitarium, with a complimentary dinner and the evening devoted to a discussion on early diagnosis of tuberculosis. The board of governors accepted the invitation. **ELMER J. SCHMIDT, Secretary.**

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MARIN COUNTY

The regular monthly meeting of the Marin County Medical Society was held on Thursday evening, January 28, at the Meadow Golf Club of Tamalpais. The occasion was a joint meeting of the medical and dental societies. It began at 7 p. m. with dinner.

Dr. H. O. Howitt, retiring president, introduced the following new officers for the coming year: C. A. Delancy, president; C. G. Perry, vice-president; and L. L. Robinson, secretary-treasurer.

The guest speakers were Assemblyman Charles Reindollar of San Rafael and Mr. Gail Apperson of the Marin County Credits Association. Mr. Reindollar gave a very interesting talk on medical legislation and the need of closer coöperation between the local medical societies and their representatives in the state legislature. Mr. Gail Apperson spoke of the benefits derived from a local credit organization for doctors and dentists. This talk was also very interesting.

Several of the visiting dentists gave short talks, showing their appreciation of the invitation from the medical society. They stated that they would probably have a joint meeting later in the year and invite members of the medical profession. Following this, two talkie surgical films were shown by a representative of the Petrolagar Company. These talkies were the first shown in the local society and were thoroughly enjoyed by everyone, so much so that a request was made to the effect that the Petrolagar Company be given the privilege to show additional films at a later meeting.

Forty members of the medical and dental profession were present. **L. L. ROBINSON, Secretary.**

SAN BERNARDINO COUNTY

The meeting of the San Bernardino County Medical Society was held at the County Hospital on Tuesday, February 2, at 8 p. m.

The meeting was called to order by the first vice-president, Dr. Fred B. Moor, in the absence of the president, Dr. George Landon, who is ill.

There were sixty members and guests present.

The application of Dr. Arthur George of Loma Linda was passed upon and he was admitted to the society.

The program of the evening was then given:

Symposium on Influenza—History of Influenza, Dr. Frank Pritchard; Etiology and Pathology, Dr. Louisa Bacon; Classifications and Symptoms, Dr. David Mock; Differential Diagnosis, Prognosis, and Sequelae, Dr. F. F. Abbott; General Treatment, Dr. George Landon; Physiotherapy in Treatment, Dr. Fred Moor; Eye, Ear, Nose, and Throat Complications, Dr. Arthur T. Gage; Surgical Complications, Dr. E. L. Tisinger; Heart Complications, Dr. Donald Brumbaugh; Prophylaxis and Public Health," Dr. E. B. Godfrey.

After this program was given, our councilor for the third district, Dr. H. J. Ullmann of Santa Barbara, was introduced. At the conclusion of his address Doctor Ullmann answered various questions.

Meeting adjourned at 10:30 o'clock after which refreshments were served. **E. J. EYTINGE, Secretary.**

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SAN DIEGO COUNTY

The program of the January meeting of the San Diego County Medical Society was provided through the generosity of the Scripps Lecture Foundation, following a custom of the last five years. Dr. Lewellys F. Barker of Baltimore was the guest speaker. Clinics were held by Doctor Barker for the county society at the Naval Hospital, the County Hospital, and at the Scripps Memorial Hospital. On Saturday evening, January 9, the county society members were guests of Miss Ellen Scripps and Mr. J. C. Harper at dinner at the Casa de Manana, and following dinner the regular January meeting was held at the Woman's Club House in La Jolla. Doctor Barker presented a paper on "Obesity." The county society is deeply indebted to the Scripps Foundation and to Doctor Sherrill, director of the Scripps Metabolic Clinic for this annual January program.

The Board of Supervisors of San Diego County at their first meeting in January reestablished the existing administration at the County Hospital. Dr. C. E. Sisson was reappointed as superintendent and also given the title of business manager. The advisory board was continued without a change in personnel. Dr. Chester O. Tanner, president of the San Diego Medical Society and Dr. James D. Bobbitt are the representatives of the County Medical Society on the advisory board. The administration at the County Hospital received the full approval of the 1931 Grand Jury.

On Tuesday evening, January 19, Dr. Willis C. Campbell of Memphis was the guest speaker of the San Diego Academy of Medicine. His subject was "The Treatment of Affections of the Lumbosacral Region." The operations of sacro-iliac and sacro-lumbar fixation were depicted by unusually satisfactory moving-picture films.

The County Medical Society is broadcasting over KFSD every Wednesday morning at 10:15. The broadcasting is under the direction of the Committee on Public Policy and Legislation, with Dr. O. W. Weiskotten as chairman.

The February meeting was held in the Elks' Club. Dr. Loyal Davis of Northwestern University presented a paper on "The Effects of Various Diagnostic and Therapeutic Solutions Upon the Spinal Cord and Its Membranes."

L. C. KINNEY, Secretary.

SAN JOAQUIN COUNTY

The stated meeting of the San Joaquin County Medical Society was held Thursday evening at 8:30 o'clock, January 7, in the Medico-Dental clubrooms, 242 North Sutter Street, Stockton. The meeting was called to order by President George H. Sanderson.

A committee, consisting of Doctors Sutton, Gallegos and Sippy, was appointed to answer a questionnaire in regard to free clinics and the conduct of the County Hospital.

A membership committee was appointed as follows: Doctors Rohrbacher, Thompson, and Doughty.

The president read his opening address in which he urged better programs to stimulate greater attendance on the part of our members. He emphasized the importance of maintaining the ethical standards of our membership and the exclusion of irregulars from our hospitals.

Doctor Sanderson urged this county society to do all possible to keep out lay control of medical practice and the inroads of irregular practitioners; to make our society a place to foster better training and closer fellowship.

Doctors Holliger and Sheldon presented some x-ray films showing metastases from breast tumors into bony tissue in one case and into the lungs in a second case.

A paper on "Current Medical Problems in the American Tropics" was read by Dr. H. H. Anderson, associate professor in practice of tropical medicine at the University of California. This was a most interesting travelogue of a recent trip through Central America, illustrated with many moving pictures.

Barefoot natives suffering from infections with ascaris and hookworm were shown.

Patients living in the coffee belt at 2000 to 4000 feet elevation suffer from infection of the entacirca in the subcutaneous tissues of the neck and scalp. This peculiar disease is found nowhere else. The only treatment seems to be excision. In Costa Rica, among a population of 56,000 in San Jose, the *Entameba histolytica* is a very common infection. Emetin is the most valuable drug for control of this disease. Typhoid is endemic here; malaria of the subtertian type and black water fever are very prevalent.

In Panama, where malaria used to be common—800 cases per 100,000—it has been reduced to fifteen by mosquito control. In the interior, 20 per cent of the people suffer from malaria and one-third have amebae. In some of the outlying districts, where there is no control, 60 per cent have malaria. This is readily reduced to 5 per cent as soon as they adopt prophylactic measures and screen their houses.

The doctor introduced a new remedy for amebiasis which, to date, has proven more effective than any other drug. This is carbasone. The patient takes one capsule night and morning for ten days, then rests for ten days before repeating. Ninety per cent of the cases clear up in the first ten days. All other forms of treatment have required six months or more. Out of seventy-five cases treated this way at the University Hospital, all but four were cured.

There being no further business the meeting was adjourned and refreshments served.

C. A. BROADDUS, Secretary.



SANTA BARBARA COUNTY

The regular meeting of the Santa Barbara County Medical Society was held at St. Francis Hospital staff room on February 8, Doctor Koefod presiding. The secretary was unavoidably absent.

The minutes were deferred till the next meeting. On motion of Doctor Shelton it was voted that the next meeting be a dinner meeting held at a time when we may entertain and hear Doctor John, who will be

here over the week-end on his way to San Francisco; and perhaps it will be possible to have Doctor Alvarez at the same time.

The paper of the evening was given by Dr. Hans Lisser on "Endocrine Disturbances of the Adrenal Glands." He went into the history and advances in our knowledge of these organs, detailed many unusual and interesting cases, showing a large number of lantern slides of patients and pathological specimens. Small and large tumors of the adrenals were shown on the screen with the changes in facial and body characteristics before and after removal.

The paper was extensively discussed by Doctors Koehler, Shelton, Sansum, and Nuzum.

It was a most interesting meeting.

P. C. MEANS, Secretary Pro Tem.



SANTA CLARA COUNTY

The December meeting of the Santa Clara County Medical Society, the annual social meeting, was called to order in the auditorium of the San Jose Medico-Dental Building by President Fagerstrom and was well attended.

The application for membership of the following physicians were read and referred to the Admission Committee: Doctors Lee M. Watanabee of San Jose, C. E. Shepard of Stanford University, and Honora McCarty of Agnew.

The program of the evening was in charge of Dr. Stanley Kneeshaw, who presented the performers. The voices of several prominent contemporary politicians and men of affairs were heard in a radio broadcast. Dr. Samuel Staub also impersonated Dr. Charles Mayo. The wholesome humor of this part of the program was thoroughly enjoyed by all of the members. Several well rendered musical numbers were presented by Dr. Charles Richards and other musicians. Refreshments were then served. The remainder of the evening was spent in games of cards and other social diversion. A genuine spirit of good fellowship pervaded the meeting. Many expressed the wish that this annual custom might be repeated for many years to come.



The regular meeting of the Santa Clara County Society was called to order by President Fagerstrom in the auditorium of the Medico-Dental Building on the evening of January 20.

The applications for membership of the following physicians were read and referred to the Admission Committee: Doctors Dan Brodovsky of Santa Clara County Hospital, Paul T. Martin of San Jose, and R. Wesley Wright of Palo Alto.

Dr. Frank Rudisill Bealer, having been favorably recommended by the Admission Committee, was elected into the membership of the society.

The written resignation of Dr. A. Mausert was read.

A letter addressed to the Parent-Teacher Association concerning the matter of preschool examinations was proposed by Dr. Lucas Empey. The letter stated that the members of the Santa Clara County Medical Society could not coöperate in the matter of preschool examinations unless some entirely new system could be worked out which would overcome certain objections which make the present procedure practically worthless, as far as any benefit to the children is concerned. A motion by Doctor Durney that the secretary be instructed to send this letter to the Parent-Teacher Associations of Santa Clara County was unanimously carried.

Dr. Fred Ryan brought to the attention of the society the fact that a certain company was attempting to obtain a fee schedule below that now in force in industrial practice. Dr. Peter Jordon then moved that the following resolution be adopted by the society:

Resolved, That the industrial fee schedule now in force be observed by every member of the Santa Clara County Medical Association, and that each of the members present who does not register his dissent expresses himself as being in accord with and agreeing to abide by the fee schedule adopted by the committee on industrial practice of the California Medical Association with the insurance company, including the state fund; and be it further

Resolved, That all members of the Santa Clara County Medical Society are to be held bound by the adoption of the ethics applicable to industrial practice heretofore adopted by this society; and be it further

Resolved, That the secretary be instructed to inform all members of the Society not present at the meeting of this resolution. A standing vote on this resolution resulted in its adoption.

The following program on medical economics was presented:

Address—"Present Status of Medical Economics from the Viewpoint of the Medical Profession," by Dr. Daniel Crosby, Oakland.

The Remedy—"An Intrasociety Insurance Company," by Dr. John H. Shepard, San Jose.

Address—"Present-Day Medical Service as Viewed by the Layman and a Discussion of the Plan Proposed by Doctor Shepard," by Mr. Hartley Peart, San Francisco, general counsel of the California State Medical Association.

After a discussion in which several members participated, Dr. Edward Newell moved that a committee be appointed to draw up in writing a definite insurance plan for families with an annual income below \$2000 per year, along the lines suggested by Dr. John Shepard. The motion was carried and the following committee appointed: Doctors John H. Shepard (chairman), Enos P. Cook, S. B. Van Dalsem, Fred Ryan, and D. P. Fagerstrom.

LUCAS W. EMPEY, *Secretary*.

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STANISLAUS COUNTY

The minutes of the regular meeting of the Stanislaus County Medical Society was held on February 12. Twenty-seven doctors were present. Dr. A. L. Van Meter and Dr. George H. Sanderson of Stockton and Dr. B. E. McDowell and Dr. Chester A. Moyle of Merced were visitors at the meeting.

Dr. E. R. McPheeters asked for an opinion on hospital advertising in magazines and local newspapers. It was moved, seconded and carried, that no member of this society extend to any newspaper or magazine any advertising unless it is endorsed by the medical society and honored by the secretary.

It was moved, seconded and carried, that in cases where it be advisable to publish any card or notice by any member of the medical society it shall be submitted to the secretary, and if there is any doubt it be submitted to the censors of the society as a whole for approval.

Case reports were presented by the following doctors:

Donald L. Robertson—Diverticulum of the Stomach.
F. R. DeLappe—Diverticulum of the Duodenal-Jejunal Junction.

A. L. Van Meter of Stockton—A Fracture of the Humerus Treated by Aeroplane Splint.

George H. Sanderson of Stockton—Cartilaginous Tumor of the Thumb.

J. K. Ransom—An Unusual Case of Pernicious Anemia.

E. F. Hagedorn—A review of six cases of fractured hip, the last two of which were treated by the Carl P. Jones splint.

Hans Hartman—Statistical review of one hundred and sixty-six cases of appendectomy.

DONALD L. ROBERTSON, *Secretary*.

TULARE COUNTY

The regular monthly meeting of the Tulare County Medical Society was held in Visalia on January 27.

Dinner was served at 7 p. m. The meeting was called to order at 8 p. m. by H. G. Campbell, president.

The application of Dr. Philip S. Barber of Porterville for membership in the society was favorably acted upon.

Election of officers for the ensuing year was held and the following members were elected to fill the respective offices: S. S. Ginsburg of Visalia, president; E. C. Bond of Hanford, vice-president; Karl F. Weiss of Visalia, secretary-treasurer.

The following members were present: Doctors Campbell, Seligman, Annie Bond, E. C. Bond, Hill, Hicks, Guido, Kohn, Betts, Preston, Fowler, Lipson, Banks, Zumwalt, Weiss, and Ginsburg. Guests: Dr. S. Suckerman, Chicago, Illinois; Mrs. W. Haight, Visalia; Mr. Stanford, Visalia; and Doctor Telefer.

The speaker of the evening, Dr. Platt W. Covington, western representative of the Rockefeller Foundation, spoke on "Public Health." The address was warmly received by those present, followed by a resolution to render all possible support to the new plan of public health administration.

KARL F. WEISS, *Secretary*.

CHANGES IN MEMBERSHIP

New Members

Alameda—Thomas O. Grieg, Charles K. Small, Francis X. Strong.

Lassen-Plumas County—B. H. Wardrip.

Los Angeles County—

David N. Alcon	Milton Kerlan
William C. Boeck	Harold K. Marshall
Jesse L. Brockow	Philip Paul B. McElhinney
William M. Byers	Albert Julius Meyer
Lyle G. Craig	Ralph Floyd Miller
John B. Doyle	Herbert S. Mooney
H. Manning Elliott	Paul H. Smitgen
George J. Hartman	Carl Hubert Talmage
W. C. Hixson, Jr.	Harry Wellington Vance
John W. Hopkins	Robert D. Wilson
Henry Leon Jones	

Monterey County—Marcel R. Bedri, Clinton Wilson.

Placer County—David M. Kindopp.

Sacramento County—Thomas William Kelsey, James F. McAnally.

San Francisco County—

Albert Ringstrom Agmar	Alfred Henry Heald
Charles W. Barnett	Joseph James Raffetto
Hildegard Henderson	William A. Reilly
Gertrude Flint Jones	Archie Marvin Roberts
Gerald George Cleary	William Lister Rogers
Thomas J. Cox	George William Tippet
Robert Douglas Dunn	

Santa Barbara County—Jules Bertero, A. M. Beekler, John Howard Childrey, Alfred Edward Koehler, Charles August Preuss.

Santa Clara County—Paul Todd Martin.

Santa Cruz County—John M. Dunphy, M. McPherson.

Tehama County—John J. Fitzgerald, Edward S. Moulton.

Tuolumne County—Robert Lucian Hamilton, Jens P. Jensen.

Yolo-Colusa-Glenn County—Charles S. Roller, Ney M. Salter.

Transfers

Christopher Leggo, from Solano to Contra Costa County.

Sverre Oftedal, from Los Angeles County to North Dakota.

James T. Parker, from San Diego to Alameda County.

Lawrence K. Zimmer, from Los Angeles County to Kansas.

Resignations

Elmer M. Claiborne from Los Angeles County.

In Memoriam

Salisbury, Samuel S. Died at Los Angeles, February 1, 1932. Graduate of Hahnemann Medical College and Hospital of Philadelphia, Pennsylvania, 1873. Licensed in California, 1887. Doctor Salisbury was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

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Sampson, Jacob Henry. Died at San Francisco, February 9, 1932, age 66 years. Graduate of University of Texas School of Medicine, Galveston, 1894. Licensed in California, 1908. Doctor Sampson was a member of the Alameda County Medical Association, the California Medical Association, and the American Medical Association.

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Tillmanns, Ernest Gustav Nathaniel. Died at Los Angeles, January 25, 1932, age 51 years. Graduate of Rush Medical College, Chicago, 1914. Licensed in California, 1916. Doctor Tillmanns was a member of the Los Angeles County Medical Association, the California Medical Association, and the American Medical Association.

NEVADA STATE MEDICAL ASSOCIATION

A. C. OLMSTED, Wells.....President
O. HOVENDEN, McGill.....President-Elect
J. H. HASTINGS, Pioche.....First Vice-President
E. E. HAMER, Carson City.....Second Vice-President
HORACE J. BROWN, Reno.....Secretary

COMPONENT COUNTY SOCIETIES

WASHOE COUNTY

The Washoe County Medical Society met in the Veterans' Hall, State Building, on the evening of February 8, Dr. John J. Sullivan presiding.

The speaker of the evening, Mr. Sullivan of Carson City, chairman of the Nevada Industrial Commission, was to be the speaker of the evening, but owing to acute illness he sent his regrets for not being present.

The application of Dr. J. P. Tuttle of Salt Lake County, accompanied by a letter from the secretary of the Salt Lake County Medical Society, was read and the applicant voted into the society.

A series of resolutions on sundry medical society affairs were offered by Doctor Servoss, chairman of the Board of Censors, and signed by Doctors Arthur Landers and Fleet Harrison, other members of the Board of Censors. The resolutions were read and ordered printed, and a copy of each sent to members. They were held over until the next regular meeting for a second reading, to be acted upon by the society.

There was considerable comment by various members with reference to the resolutions as read, but action on same was deferred until next meeting.

The following members were present: Doctors Sullivan, Morrison, Muller, Landers, J. L. Robinson, Smith, Dwight Hood, Williams, Egan, Harrison, Fuller, Tuttle, Hund, Maclean, Stadtherr, Servoss, DaCosta, Lehnars, W. H. Hood, Paradis, and Bath. Visitors were: Doctors McPherson and Davis Westwood.

THOMAS W. BATH, *Secretary*.

UTAH STATE MEDICAL ASSOCIATION

R. A. PEARSE, Brigham City.....President
F. M. McHUGH, Salt Lake City.....President-Elect
L. R. COWANS, Salt Lake City.....Secretary
J. U. GIESY, Kearns Building, Salt Lake City.....Associate Editor for Utah

OFFICIAL NOTICE

Beginning Tuesday, February 16, the Utah State Medical Association again goes on the air. Short five-minute talks will be given over station KDYL, Salt Lake, Tuesday and Thursday mornings at 10:30 o'clock on health subjects. It is hoped that these brief considerations of matters affecting the public health may be the means of exciting interest and better understanding in the public mind of the objects of modern medicine. Listen in.

COMPONENT COUNTY SOCIETIES

BOX ELDER COUNTY

The meeting of the Box Elder County Medical Society, held in Brigham City October 15, 1931, was the annual election meeting, and the following officers were elected: E. H. White, president; T. E. Betenson, secretary; Dr. Merrill, vice-president; A. D. Cooley, delegate; O. D. Luke, alternate; R. A. Pearce and E. A. Weymuller, censors.

It was decided at the meeting to attend outside meetings and bring in special speakers for papers when possible.

The November meeting was postponed to meet with the Weber County Society.

Doctor Cooley was appointed to act as Public Relations man and Doctor Pearce was appointed to act on the Legislative Committee.

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The December meeting of the Box Elder County Medical Society was held in Tremonton on December 16.

Dr. Eugene Smith of Ogden gave a very instructive paper on "Intracranial Birth Injuries." Doctors Cooley, Pearce, White, Merrill, and Betenson were present. Dr. Jay M. Shaffer was also present and presented a membership card from the Salt Lake County Medical Society and asked admittance into the Box Elder County Medical Society. The matter was left with the censors to get a report from the Salt Lake County Society.

T. E. BETENSON, *Secretary*.

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SALT LAKE COUNTY

A regular meeting of the Salt Lake County Medical Society was held Monday evening, January 11, at the Holy Cross Hospital. The meeting was called to order by President Neher at 8:05 o'clock. The minutes of the preceding meeting were read and accepted.

President Neher then turned the meeting over to the Holy Cross Hospital for a clinical program.

Dr. J. P. Kerby presented a case of Osgood's disease of the knee.

Dr. W. A. Pettit presented a case of femoral hernia the sac of which contained a subacutely inflamed appendix.

Dr. L. N. Ossman presented a case of giant cell tumor of the femur.

Dr. Sol Kahn and Dr. J. P. Kerby presented a case of abdominal adhesions.

Dr. John Sugden presented a case of ulnar nerve paralysis.

President Neher then resumed the chair.

Dr. W. A. Pettit gave an interesting and detailed report on the activities and accomplishments of the

City Board of Health. He described the allocation of funds to the different activities of the board and showed that the division of food inspection received more in licenses than its expenses. He commented on the recent demands for reduced expenditures by the board and expressed a fear that this would endanger public health. This report was discussed by Drs. E. F. Root, J. P. Kerby, and L. J. Paul. President Neher announced the appointment of a Committee on Public Health and stated that the cooperation of this committee had been offered to the City Commission.

On Monday evening, January 25, a meeting of the Salt Lake County Medical Society was held at the Newhouse Hotel. The meeting was called to order at 8:05 o'clock. Forty-seven members and two guests were present. President Neher then asked Dr. L. L. Daines, the acting dean of the Medical School, to take the chair.

Dr. C. B. Freudenberger presented a paper on "The Effects of a Deficiency of Recently Discovered Vitamins."

Dr. Seward E. Owen presented a paper on "Viscero-cardiac Reflexes."

President Neher asked the vice-president, Dr. C. F. Pinkerton, to take the chair while he presented an important discussion of the problems in medical economics now facing the public and the medical profession. Referring to complaints of the public on the high cost of medical care, he expressed a fear that such feeling might lead to forms of social medicine unsatisfactory both to the public and the profession. He urged the profession to take leadership in studying this problem impartially from both points of view. He suggested the appointment of an advisory committee to the president and with the help of this committee the appointment of appropriate committees to study the whole problem of medical care. Drs. J. P. Kerby, W. R. Tyndale, and A. C. Callister discussed and commended the president's statement. Dr. W. R. Tyndale moved that the appointment of the committees as suggested be made. The motion was seconded by Dr. R. T. Woolsey and passed without dissent.

Dr. J. Z. Brown reported that the Council of the State Association had not acceded to the request of this society that an increase of dues be postponed. Dr. A. C. Callister moved that the county society instruct its delegates to call a meeting of the House of Delegates and that in such meeting our delegates act to rescind the action of the Council. This motion was seconded by Dr. D. E. Smith. After discussion by Doctors Rich, Cowan, Raly, Kahn, E. F. Root, Cornwall, and Critchlow, the motion was lost (16 to 15). It was moved by Dr. F. F. Hatch, and seconded by Dr. Sol Kahn that the secretary be instructed to pay no additional dues to the State Association until the House of Delegates meets and then only if so ordered. Dr. J. Z. Brown moved that this be laid on the table for two weeks. The latter motion was seconded by Dr. W. R. Tyndale and passed.

Dr. J. P. Kerby moved the following resolution:

Whereas, The members of this society donate free services annually to the General Hospital of about \$250,000, and do this gladly, for the sake of the poor who are unable to pay for a private physician, this society considers it only just that in cases where a patient in that hospital is able to pay the hospital he shall also pay the attending physician. This society considers it unjust to attempt to divert to the county the pay due such physician, and would consider it a breach of faith with those physicians who donate their services free to that hospital.

This was seconded by A. C. Callister and passed. Dr. M. M. Critchlow moved the following resolution.

Whereas, Dr. Augustus C. Behle, past president of the Salt Lake County Medical Society and the Utah State Medical Association, has been continu-

ously an active member of this society for thirty-seven years; and

Whereas, Because of illness he has been compelled to discontinue permanently the practice of medicine at the age of sixty-one; therefore be it

Resolved, That, in consideration of past services, Doctor Behle be made a life member of the society without payment of dues, effective January 1, 1932; and be it further

Resolved, That he be presented with a copy of this resolution and the expression of appreciation of this society.

This was seconded by Dr. J. Z. Brown and passed.

It was moved by Dr. R. T. Woolsey that an assessment of \$1.50 each be levied on the members having a front-page telephone listing and that this be paid by April 1. This was seconded by Dr. A. C. Callister and passed.

Dr. Richard Middleton was elected to membership.

The application of Doctor McLaughlin for membership was read and referred to the board of censors.

A regular meeting of the Salt Lake County Medical Society was held Monday evening, February 8, at the Salt Lake General Hospital. The meeting was called to order by President Neher at 8:10 o'clock. Forty-five members and ten guests were present.

President Neher then turned the meeting over to the Salt Lake General Hospital for a clinical program.

Earl F. Wight presented a case of "Acromegaly."

J. Z. Brown, Jr., presented a case of "Pernicious Vomiting of Pregnancy" and one on "Preclampsic Toxemia."

R. Middleton presented cases of "Urethral Calculi" and "Spina Bifida Occulta with Urinary Incontinence."

R. J. Alexander presented a case of "Anomaly of Colon."

R. Tandowsky discussed "Pneumonia Treatment."

L. W. Snow presented a case of "Spondylolisthesis."

Dr. R. F. McLaughlin was elected to membership of the Salt Lake County Medical Society.

L. E. VIKO, *Secretary.*

WEBER COUNTY

The regular meeting of the Weber County Medical Society was held January 21.

Committees for service during the coming year were announced:

Programs and Scientific Work—Doctors S. W. Badcon, Vernon L. Ward, and William M. McKay.

Public Health and Legislation—Doctors Ezra Rich, F. K. Bartlett, and E. R. Dumke.

Dr. Joseph R. Morrell proposed the erection of a medical arts building similar to the one in Salt Lake, which was then discussed and a committee consisting of Doctors Joseph R. Morrell, R. L. Draper, and G. M. Fister was appointed by President Badcon, to meet with a similar committee from the dental society to consider the matter and report in the near future.

Dr. G. Gill Richards of Salt Lake City, the guest speaker of the evening, was then introduced. He gave a very interesting and instructive discussion on the medical treatment of gastric ulcer.

WILLIAM M. MCKAY, *Secretary.*

The Chiropractic Initiative.—Although the law requires the signatures of but twenty thousand registered voters on a petition of initiative, the chiropractors recently filed one with the office of the Secretary of State of Massachusetts with sixty thousand signatures.—*New England Journal of Medicine*, December 31, 1931.

MISCELLANY

Under this department are ordinarily grouped: News; Medical Economics; Correspondence; Twenty-five Years Ago column; Department of Public Health; California Board of Medical Examiners; and other columns as occasion may warrant. Items for the News column must be furnished by the twentieth of the preceding month. For Book Reviews, see index on the front cover, under Miscellany.

NEWS

Coming Meetings—

American Medical Association, New Orleans, Louisiana, May 9-13, 1932, Olin West, M. D., 535 North Dearborn Street, Chicago, Illinois, Secretary.

California Medical Association, Hotel Huntington, Pasadena, May 2-5, 1932, Emma W. Pope, M. D., Room 2004, 450 Sutter Street, San Francisco, Secretary.

American College of Physicians, San Francisco, California, April 4-8, 1932, William J. Kerr, University of California Medical School, Fourth and Parnassus avenues, San Francisco, General Chairman.

Pacific Northwest Medical Association, Spokane, Washington, June 27-29, 1932, C. W. Countryman, 280 Paulsen Medical-Dental Building, Spokane, Washington.

Income Tax Reports Are Due.—This March number of your JOURNAL will be delivered to members of the California Medical Association a few days before federal income tax reports must be filed, the last day for such filing being March 15.

IN CALIFORNIA AND WESTERN MEDICINE of February, 1931 (page 138), were reprinted income tax regulations with particular reference to income and expenses of physicians. The February 13, 1932, JOURNAL of the *American Medical Association* (page 574), brings these regulations up to date.

For members of the profession who may be in doubt on classification of certain income, expenses and losses, the above articles may be of service, and attention is accordingly called thereto.

Medical Supervision of Tenth Olympic Games, Los Angeles, 1932.—The preliminary organization plans for the medical supervision of the international Olympic Games which will be held in Los Angeles in July, 1932, has been submitted to the central Olympic committee by Sven Lokrantz, M. D., medical director of the games. Doctor Lokrantz is chairman of the Executive Medical Advisory Committee, the other members of which are Doctors Harry H. Wilson, E. C. Moore, George H. Kress, and C. Morley Sellery. The broad scope of the medical arrangements is indicated from the following paragraph on personnel, taken from Doctor Lokrantz' report:

Personnel:

- Sven Lokrantz, M. D., medical director of the games.
- C. Morley Sellery, M. D., assistant.
- Physicians for Olympic Village Hospital during residence of athletes (approximately twenty-five days).
- Physicians for stadiums, two hundred and sixty-two shifts.
- Woman physician for women athletes during residence of athletes (approximately twenty-five days).
- Two nurses for women athletes.
- Five volunteer nurses.
- Two nurses for Olympic Village Hospital.
- One clerk for Olympic Village Hospital.
- Twelve leading physicians, constituting a Medical Advisory Board; three of these physicians, with the director and assistant director, constituting the Executive Medical Advisory Board.
- Twelve consultant surgeons.
- Forty volunteer medical advisers—a physician for every nation, preferably a physician of the same nationality as the competing group.
- Research board of ten volunteer physicians to examine such athletes as have signified their willingness to be examined in connection with certain special events which will be decided on later by the Olympic Committee.

American Board of Obstetrics and Gynecology.

The next written examination for applicants for certificate from the American Board of Obstetrics and

Gynecology will be held in some six cities (San Francisco included) on Saturday, March 26, at 2 p. m., under the direction of the examiners and assistant examiners of the board.

The examination will consist of questions on obstetrics and gynecology; is for Group B candidates and must be accompanied by fifty case records. Group A candidates are not required to take this examination nor to provide case records, and notice of the next oral and clinical examination for all applicants will be published at a subsequent date. For further information and details apply to the secretary, Dr. Paul Titus, 1015 Highland Building, Pittsburgh, Pennsylvania.

Bulletin of the Southern Pacific Hospital.—A newly established medical publication in California is the *Bulletin of the Southern Pacific Hospital*. Volume 1, number 1, is a well arranged and interesting journal of some fifty pages. The opening article is an historical sketch of the Southern Pacific Hospital Department, with special emphasis on the splendid new Harkness addition to the Southern Pacific General Hospital at San Francisco, funds for which were given by Edward H. Harkness of the Southern Pacific directorate. This addition was dedicated on November 4, 1931, the dedication address being made by Dr. Walter B. Coffey, chief surgeon of the Southern Pacific Company. The staff of the hospital, as printed on the initial page, contains the names of some of San Francisco's best known physicians and surgeons. Members of the profession who desire copies of this new publication should send requests to Southern Pacific Hospital Department, San Francisco.

Meeting of Pacific Northwest Medical Association.

The meeting of the Pacific Northwest Medical Association will be held in Spokane, Washington, June 27, 28, and 29, 1932. The speakers will be: Henry C. Bazett, Samuel R. Cunningham, H. Gideon Wells, William J. Kerr, Phillip H. Kreuscher, Charles B. Wright, Temple S. Fay, Henry E. Michelson, and Richard T. Atkins. The meetings will be held at Davenport Hotel, Spokane. Committee of Arrangements—Drs. F. G. Sprowl and C. W. Countryman.

The Semiannual Alumni Day of the University of California Medical School will be held at the University of California Hospital on Tuesday, March 22, 1932. The program is as follows:

MORNING SESSION

8:30 to 11:30—Operative clinics:

- Neurosurgery and general surgery—Dr. Howard C. Naffziger and staff.
- Gynecology—Drs. Frank W. Lynch and Alice F. Maxwell.
- Urology—Drs. Frank Hinman, Sidney Olsen, and Clark M. Johnson.
- Otorhinolaryngology—Dr. Wallace B. Smith.
- Ophthalmology—Dr. Joseph L. McCool.
- Orthopedic Surgery—Dr. LeRoy C. Abbott and staff.

10:00 to 12 noon—Pediatric ward rounds—H. Ward. Dr. Francis S. Smyth and staff.

10:00 to 11:30—Medical staff conference, Toland Hall. Demonstration of patients, with discussion opened by Drs. W. J. Kerr, Ernest H. Falconer, Alfred C. Reed, Sidney J. Shipman, H. Clare Shepardson, the staff, and Dr. J. C. Meakins (professor of medicine, McGill University faculty of medicine). Pathology—Dr. Charles L. Connor. X-ray—Drs. Howard E. Ruggles and Robert S. Stone.

AFTERNOON SESSION—TOLAND HALL

- 2:00—Allergic Migraine and Indigestion—Dr. Albert H. Rowe.
 2:20—Bacteriophage Therapy: Its Indications and Limitations—Dr. A. P. Krueger.
 2:40—The Developmental Pathology of Congenital Dislocation of the Hip Joint—Dr. John B. Saunders.
 3:00—Intolerance to Carbohydrate Associated with Pathological Intestinal Flora—Dr. T. L. Althausen.
 3:20—Monocytic Leukemia—Dr. James F. Rinehart.
 3:40—Cinobufagin in the Treatment of Certain Types of Heart Disease—Dr. Dudley W. Bennett.
 4:00—Annual Alpha Omega Alpha Lecture: Topic to be announced later—Dr. J. C. Meakins.

University of California 1932 Lectures.—J. C. Meakins, M. D., F. R. C. P. E., F. R. S. E., F. R. S. C., C. A. M. C., professor of medicine and director of the department of medicine, McGill University; director of University Clinic and physician-in-chief of Royal Victoria Hospital, Montreal, Canada, will be at the University of California Medical School as University lecturer from March 11, to April 2, 1932.

Doctor Meakins was born in Hamilton, Canada, May 16, 1882. He was educated in Montreal, receiving his M. D. degree from McGill University, College of Medicine, where he held numerous positions. He also was resident pathologist at the Presbyterian University, New York, 1907-1910, and Christison professor of therapeutics, University of Edinburgh, and physician to the Royal Infirmary, Edinburgh, 1919-1924.

The University Lectureship was established at the Medical School in 1930. The first University lecturer was Dr. Llewellys Barker of Baltimore, Maryland, and the second was Dr. Herman Adler. Each year a distinguished physician is invited to fill the post, which requires that the incumbent conducts clinics and demonstrations at the Medical School during his month's incumbency. Members of the medical profession are welcome to attend various of Professor Meakins' conferences, and the University hopes that many California physicians will avail themselves of the opportunity to follow the teaching of this great clinician and investigator.

SCHEDULE FOR DR. J. C. MEAKINS UNIVERSITY OF CALIFORNIA MEDICAL SCHOOL 1932 LECTURES

- March 14 (Monday), 12:00-1:00 p. m.—Demonstration clinic (fourth-year class), Toland Hall, University of California Hospital.
 March 15 (Tuesday), 8:15 p. m.—Address—San Francisco County Medical Society, 2180 Washington Street.
 March 16 (Wednesday), 9:00-11:00 a. m.—Medical staff conference, Toland Hall.
 March 19 (Saturday), 11:00-12:00 noon—Demonstration clinic (fourth-year class), Medical Amphitheater, San Francisco Hospital.
 March 21 (Monday), 12:00-1:00 p. m.—Demonstration clinic (fourth-year class), Toland Hall.
 8:00 p. m.—Demonstration clinic, Alameda County Medical Society.
 March 22 (Tuesday), 10:00-11:30 a. m.—Discussions: University of California Medical School Alumni Day program, Toland Hall.
 March 26 (Saturday), 11:00-12:00 noon—Demonstration clinic (third-year class), Medical Amphitheater, San Francisco Hospital.
 March 28 (Monday), 12:00-1:00 p. m.—Demonstration clinic (fourth-year class), Toland Hall.
 March 30 (Wednesday), 9:00-11:00 a. m.—Medical staff conference, Toland Hall.
 March 31 (Thursday), 3:30 p. m.—Lecture to fourth-year students, Stanford University Medical School.
 April 2 (Saturday), 11:00-12:00 noon—Demonstration clinic (third-year class), Medical Amphitheater, San Francisco Hospital.
 April 4—(Monday), 12:00-1:00 p. m.—Demonstration clinic (fourth-year class), Toland Hall.
 April 7 (Thursday), 10:00-11:00 a. m.—Symposium: Ten Years' Experience in the Use of Insulin.

MEDICAL AND DENTAL OFFICERS FORM LEGION MEDICAL POST

Medical Post No. 441, Los Angeles, is now organized and operating as an active post of the American Legion. This post is organized in memory of the men and women of our profession who made the supreme sacrifice during the World War. It has been decided that the membership of the Medical Post shall be composed of medical and dental officers who served in the Army, Navy or Marine Corps during the World War, and otherwise eligible under the provisions of Article IV of the National Constitution of the American Legion.

The elected officers of Medical Post are: John F. Martin, M. D., commander; Samuel G. Bay, M. D., first vice-commander; M. H. Topping, M. D., second vice-commander; R. L. Sturges, M. D., adjutant; Edward W. Wahl, M. D., sergeant-at-arms; Jenner P. Chance, M. D., historian, and J. A. Rene, M. D., chaplain.

Medical Post No. 441, American Legion, is ready to serve all veteran medical officers of California who served during the World War and who have manifested disabilities since their separation from military or naval service, but through ignorance of rights, neglect, financial independence, or self-pride have failed to file a claim for compensation or disability allowance with the United States Veterans Administration.

The World War Act, as amended, provides for the direct service connection of disabilities incurred in or aggravated by military or naval service. It also provides for the service connection of disabilities under the benefit of presumption for chronic constitutional diseases manifest within one year from date of separation from service and for active tuberculosis, neuropsychiatric, and *Amoeba histolytica* disabilities manifest to a degree of ten per cent or more prior to January 1, 1925.

The Congressional Act of July 3, 1930, provides for disability allowance for definitely diagnosed disabilities of a permanent nature in classes of 25 per cent, 50 per cent, 75 per cent and permanent and total degree, the respective payments being \$12, \$18, \$24 and \$40 a month. It is necessary that the claimant did not receive a dishonorable discharge from service, and that his disabilities are not the result of misconduct.

It should be sound procedure for any disabled veteran medical officer to take advantage of the provision of the law and file a claim with the Veterans Administration so that his rights may be determined. A veteran entitled to financial benefit from the government can at least invest the money for the protection of his family, and provide for his widow's possible pension rights.

Medical Post No. 441 will gladly aid any veteran medical officer to file a claim for compensation or disability allowance. Communicate with the commander and proper application blanks will be sent.

The commander of Medical Post No. 441 is John F. Martin, M. D., 1816 South Figueroa Street, Los Angeles.

CORRESPONDENCE

Subject of Following Letter: Request of National Committee on Costs of Medical Care for Copies of September California and Western Medicine.

To the Editor—We should like to distribute to the members of the Committee on the Costs of Medical Care and to a few other especially interested persons reprints of "The Medical Economics Symposium" which appeared in CALIFORNIA AND WESTERN MEDICINE in September, 1931. For this purpose we need seventy-five copies.

Do you have such reprints available for distribution?

Sincerely yours,

ALDEN B. MILLS,
Executive Secretary.

910 Seventeenth Street, Washington, D. C.

Editor's Note.—This request for the interesting "Medical Economics" symposium unfortunately reached California and Western Medicine after the edition had been exhausted. The request is here reprinted because it is a compliment to the official journal of the California Medical Association and its contributors.

Subject of Following Letter: New San Francisco Health Regulation to Aid in Prevention of Food Poisoning.

To the Editor—I am enclosing regulation passed by the Board of Health at my request and because of the attached investigations by my associates and myself.* You will note that two of these outbreaks were in hospitals, and we deemed the matter so important that the regulation is necessary. Needless to say it will be absolutely enforced.

Sincerely,

J. C. GEIGER, M. D.,
Health Officer.

SAN FRANCISCO HEALTH DEPARTMENT REGULATION

"It shall be unlawful for any person, firm, association, or corporation within the limits of the city and county of San Francisco to manufacture, import, offer for sale, to sell or distribute, or to use, any living culture or preparation of bacteria, or of any other group of microorganisms potentially dangerous to man, for the purpose of destroying rats, other rodents, or vermin."

Subject of Following Letter: Memorandum From Director of Public Health of San Francisco Concerning an Executive Order Prohibiting Sale of a Certain Depilatory.

To the Editor—For your information I am sending you herewith copy of a communication sent to the *Journal of the American Medical Association* relative to a depilatory named Koremlu.

Sincerely,

J. C. GEIGER, M. D.,
Director.

The item is as follows:

"As a result of a dinner with a number of the leading dermatologists practicing in San Francisco, and the editorial in the *Journal of the American Medical Association* with reference to Koremlu, a depilatory containing thallium acetate, may I state that its sale was forbidden in

* *Editor's Note.*—The enclosure was a copy of Reprint No. 1489 from the Federal Public Health Reports (for sale by the Superintendent of Documents, Washington, D. C., at five cents per copy), having the caption: Three Outbreaks of Food Poisoning Apparently Due to B. Enteritidis, B. Paratyphosus B (Aërrycke Type), and B. Paratyphosus A, Respectively.

San Francisco by an executive order of the Director of Public Health. Very few protests were made, one in particular being made by the representative of the firm who was at the time present in San Francisco. Despite his vigorous protests, the order remains as originally issued."

Subject of Following Letter: Comments on Doctor Adelstein's Article in February California and Western Medicine, Page 121.

To the Editor—The department of CALIFORNIA AND WESTERN MEDICINE entitled "Medicine Today" has often proved of interest. The contraction of related reviews of various books and articles with an editorial comment presents some difficulty; when well done by a man of sufficient experience to discuss editorially the subject-matter, the item is of great value.

In the article entitled "Physiologic Limitations of Surgery of the Sympathetic Nervous System" by Leo J. Adelstein of Los Angeles, the undisputed fact of smooth muscle relaxation, both in visceral conditions such as Hirschsprung's disease or of vasospasm in certain vascular affections, is clearly pointed out.

Workers, such as Royle, Von Lackum, and Stewart, of broad and intimate experience with cases of spastic paralysis, dating from months and years before as well as after various operations, have repeatedly demonstrated the increased surface temperature of the hands and feet following sympathectomy with a variable improvement in the incoördination defect. It is curious that the most renowned physiologist of our times states so positively that sympathectomy is without physiologic justification apparently because Royle's hypothesis as to the explanation for the improvement has been disproved. It seems obvious that no difference as to the why and wherefore should be permitted to obscure observable phenomena. It is a simple physiologic fact that our muscles do not work as well when chilled as when thoroughly warm. Two years ago Doctor Stewart advanced the suggestion that the improvement in circulation following sympathectomy was the basis of the clinical improvement, easily observed in many cases if the examiner has an intimate knowledge of what the patient can do before as well as after operation.

The article, then, unfortunately denies the existence of phenomena which have been observed in many hundreds of patients. And this by men who have had extremely little clinical experience in the condition, as far as knowing the patient before and after operation.

It is to be hoped that difference of opinion as to the theoretical explanation of phenomena will not indefinitely obscure the importance of adequate observation as to the presence or absence of such phenomena.

Yours very truly,

VERNON P. THOMPSON.

Subject of Following Letter: Suggestion that Pacific Coast Physicians Who Are Interested Form a Medical Art Club.

To the Editor—On communicating with six medical art clubs of the East I find that many medical men on the Pacific Coast are sending their paintings, etchings, and sculpture to various annual exhibits of these various art clubs.

Dr. E. B. Krumbhaar of the University of Pennsylvania, in discussing this fact, very wisely suggested: "I should think that it would be so expensive for your doctors on the Pacific Coast to pay for insurance and transportation of your works of art back here to our eastern cities that it would be better and more interesting for you to organize a similar club and exhibit in California."

Now there are some fifty doctors, including Washington, Oregon, California, Utah, Colorado, and Arizona, who devote their spare time to one of these art hobbies and many of these medical artists are really doing very meritorious work.

It seems to me, sir, that our climate out here and the settings over this whole coast area lead themselves more to art hobbies than anything we see in the East. The proof of this is the notable art colonies on this coast, and the products of their labors are world-famous in many instances.

Thus it seems to me that Doctor Krumbhaar's suggestion is well taken that we can organize a medical art association here patterned after the famous one of which Dr. Louis C. Schroeder of New York City is the head (his office is 50 East Seventy-second Street) and have, at least, yearly exhibits in one of our well-known art galleries.

In order to bring the idea of such an organization to the attention of the medical men of this coast, I wish you could either publish this letter, or better yet, make excerpts from it so that any professional men out here who may be interested could get in touch with me so we may get together for a preliminary discussion of this matter.

Hoping I have made the matter clear to you and that in the next issue of *CALIFORNIA AND WESTERN MEDICINE* you may get it before the medical men at large, I am

Respectfully yours,

F. H. REDEWILL, M.D.,

1162-1168 Flood Building, San Francisco.
Johns Hopkins, 1906.

TWENTY-FIVE YEARS AGO*

EXCERPTS FROM OUR STATE MEDICAL JOURNAL

Vol. V, No. 3, March 1907

From some editorial notes:

Society Work.—Is it worth while to be alive, or might one just as well be dead? "To be or not to be, that is the question." If one is going to live, why not live fully and helpfully and die with the knowledge that the world is at least no worse off for our having cumbered it for a brief space. There are so many things to be done, so much work waiting to one's hand, that it seems incredible that there can be any who may go through the world and live their lives without appreciating it. And for us, as physicians, there is perhaps more work than for others, who understand less well, all that needs to be done. . . . Our inertia, our apathy and our failure to do our duty by the community are responsible for many things. Often the good work that a few men might do in a county is hindered or prevented by the petty jealousy of two or three men who will not do anything toward making an active county society themselves, nor will they permit others to do what they should and would like to do. Is there no way of waking up those who are asleep? Is there no way of galvanizing a little life into some of our profession who are really two-thirds dead and don't know it?

Possible Strength.—None knows so well as the physician that it is not only wrong but dangerous to allow public health institutions to be political playthings. The average competent and reputable physician will not devote his time to "making good" with local politicians, nor to being a "good fellow" and a "glad-hand artist" with the voters of his community merely to gain support that will eventually mean some political office. He is, as a rule, too busy with his study or his practice and he does not seem to realize that political work need not necessarily be done in the "glad hand" style. He thinks it must be so

* This column strives to mirror the work and aims of colleagues who bore the brunt of state society work some twenty-five years ago. It is hoped that such presentation will be of interest to both old and recent members.

done, and so he wraps the ten talents of his influence in the covering of his self-esteem and buries them; he allows his potential strength to lie dormant. . . .

Educational Campaign.—How are we going to bring about any betterment of this condition of things? By helping to take the control of our State, which is the legislature, out of the hands of cheap and unworthy politicians. And how can we help in doing that? By showing the better element in our various communities the actual and definite harm that is resulting from political control of the sick, and the tremendous expense to the State of lack of proper sanitary control. . . .

Support the Association.—Doubtless but few of us realize as yet the tremendously valuable work which is being done for the medical profession of this country by the American Medical Association through its Council on Pharmacy and Chemistry. . . .

From an article on "Remarks on the Present Status of Intranasal Surgery" by Louis C. Deane, M.D., San Francisco.

In the past six years such rapid strides have been made in intranasal surgery that those who have not kept in active touch with the workers in this field and with the literature, can hardly conceive the splendid progress that has been made and of the remarkable achievements of such men as Killian, Hajek, Jansen, Luc, and Grünwald. . . .

From an article on "Diagnosis and Treatment of Ectopic Pregnancy" by George B. Somers, M.D.

One of the most interesting conditions met with in the diseases of women is ectopic pregnancy. It fixes the attention because of its insidious nature, the obscurity of its symptoms, and because it often ends fatally even before the true situation is realized. . . .

From an article on "European Clinics" by Edward C. Sewall, M.D., San Francisco.

On my recent visit to the clinics in Europe I saw many things that interested me. Many of them I have already found of great advantage in my work and I present them with the hope that some of the points may possibly be of interest to you. . . .

From an article on "Reports of Focal Operations in Hip-Joint Tuberculosis—A Discussion Finished" by Harry M. Sherman, A.M., M.D., San Francisco.

When Doctor Huntington read his paper before the society, describing and discussing his three operations of tunneling the neck of the femur to reach a tuberculous focus in the femoral neck or head, all of which had been successful, I was invited to open the discussion. . . .

From an article on "Demonstration of a Patient Showing the Effect of the X-Ray on the Epithelial Structures of the Skin" by Douglass W. Montgomery, M.D., San Francisco.

. . . After the x-raying of four years ago, the hair fell out of the scalp adjacent to the right ear, and also out of the beard of the right side of the face. The hair of the scalp has partially grown in, but that of the right side of the face has not returned; not even as downy hair. The bald skin is not atrophic, and looks much better, from a cosmetic point of view, than the skin of the rest of the face. . . .

DEPARTMENT OF PUBLIC HEALTH

By GILES S. PORTER, M. D.
Director

Prevention of Cancer.—According to a recent statement by the United States Public Health Service, one of the reasons why so many people die of cancer lies in the fact that the disease usually exists for some time before it is recognized and treated. It has then progressed from a local and small cancer to a large and dangerous one. It is, therefore, of importance that everyone should know something of the first symptoms of this disease.

If a beginning cancer was as painful as a sting, many people would go promptly to a physician and so receive the needed treatment early. But at first there is no pain or inconvenience. The symptoms develop gradually. Any lump, especially in the breast, which comes and remains for some time without satisfactory explanation should be looked upon with suspicion. One should go immediately to a competent physician. In many cases the suspicion of cancer will have been unfounded, but it is best to be safe.

Any sore that does not heal in persons above 35 years of age, particularly about the tongue, mouth or lips, is suspicious of cancer. Attention should be given to a spot where a tooth is broken or where there is an ill-fitting dental plate which has rubbed until a sore has resulted.

Any irregular bleeding or abnormal discharge from any of the orifices of the body is a danger signal which should be promptly heeded.

Persistent indigestion with loss of weight is a symptom of cancer of the stomach, which is so frequent as to make its earliest possible detection important.

There is no evidence to show that cancer is contagious. There is, therefore, no occasion to shun a person who has cancer, so far as danger of contracting the disease is concerned. The precautions to be taken by those who come in contact with cancer patients are only such as should be followed with infected wounds. Cancer is a disease against which improved sanitation is not capable of producing any effect, and personal hygiene has but a limited application.

It is desirable to treat all diseases in their early stages, but in no affection is it more necessary than in cancer. The danger is like that of a fire. At first there is but a spark which can readily be extinguished. As the flames spread the fire becomes more and more unmanageable. At last a consuming fire develops and control is no longer within human power.

The organized war against cancer which is being carried on in all civilized countries aims to discover all individual cases of the disease at the earliest possible time, and to advise competent medical care for the patient. The patient must give full cooperation to the medical profession, for it is obviously impossible for a physician to render any help unless the patient applies for it. The first thing, then, is for the public to learn the danger signals of cancer and report immediately to a physician upon suspicion being aroused that cancer is present or impending.

The second line of attack is research. More facts about cancer need to be discovered; how and why it occurs; by what procedure it may be prevented and cured. There is a great deal of information upon these subjects already, but there is need for more.

Many cases of cancer can be cured, and many more prevented, if the general public will give its full cooperation to the medical profession, which is striving to eliminate this disease.

Physical examinations at periodic intervals made with an eye alert to cancer, afford one of the best

means of protection against this disease. Such examinations should be taken once a year after the age of 35 has been reached.

Surgery, x-ray, and radium are the main weapons which are used to combat this disease. They are used as a preventive and as a cure. They are employed as preventives when they remove precancerous conditions, and as a cure when they eliminate cancer itself.

One of the reasons why cancer is so frequently fatal lies in the fact that those attacked are at first inclined to temporize with the condition. Some try home remedies, others put their faith in the advice of persons who know little or nothing about this subject.

When a person suspects that he or she has cancer the thing to do is to apply immediately to a competent physician or to a clinic. If he has a good family physician, that is the person to be consulted. If he wants to find a good physician he should select one who stands well among his fellows, one who occupies a responsible position in a hospital, one who is recommended by some other good doctor.

The cancer problem is, of course, the most baffling of those in the field of preventive medicine yet remaining unsolved. We should listen to no voice of discouragement. It is only by extending the present centers of cancer research and by creating new centers that success will ever be attained.

Oakland Makes Health Census of School Children.

In an effort to extend the program of immunization against communicable diseases, Dr. A. H. Hieronymus, City Health Officer of Oakland, has undertaken a health survey of pupils in attendance upon the public schools of the city. Cards are issued to parents and guardians of school children, upon which vital information relative to the medical history of the pupil is asked. Every pupil in the public schools, from the kindergarten to the high school, is included in the survey. Complete histories, relative to the communicable diseases from which the child may have suffered, are asked for, as well as histories of immunization procedures. Doctor Hieronymus has secured the services of a statistician who will compile a report of the census which will constitute an important factor in the inauguration of a complete survey for the immunization of all school children against both diphtheria and smallpox.

Psittacosis Cases Reported.—At least two outbreaks of psittacosis, "parrot fever," have occurred in California during December and there is a strong possibility that other cases, as yet undiscovered, may have occurred within the state. The outbreaks that have been discovered and investigated by the State Department of Public Health are in Nevada and Merced counties. In Nevada County a traveling bird-van appeared in the community November 18, 19, and 20. In one family, a pair of parakeets was purchased November 20. One of these birds was taken sick and died about December 2. Two adult guests of the family became ill December 3; a member of the family was taken ill on December 5, and still another on December 14. All of these individuals presented symptoms typical of psittacosis and all of them died. There is a case of illness in a young adult who cared for one of these patients, and it is considered that this individual is suffering from a mild case of psittacosis. It is apparent that the disease may be contracted from person to person, as well as from birds, but such cases are not of frequent occurrence.

In Merced County two parakeets were purchased the last of November. One bird died December 25 and the other December 27. The mother of the family, who is past sixty years of age, at this writing is very ill. Young adults in the family who are contacts have, as yet, shown no signs of illness. These birds in

Merced County were also purchased from a traveling bird vender. Steps have been taken to locate this man and to determine the source of supply.

Health officers are warned to be alert for cases of illness in families which have recently acquired parrots, parakeets, or similar birds from unknown dealers. Such birds should not be handled. If they show any signs of illness, extreme care should be used in feeding them. It is important that gloves of impervious material be worn while handling parrots or similar birds if they are sick and they should be kept in strict isolation.

Apparently, psittacosis may be transmitted by birds that are, to all appearances, in good health as well as by sick birds. Cold weather may precipitate illness in an apparently well bird, with the presumption that such a bird may have been a carrier of the virus of the disease. It may also be possible to contract the disease through contact with the cage which has housed a sick bird.

Psittacosis was reported extensively in the United States in 1929 and 1930. According to the records of the United States Public Health Service, 169 cases of psittacosis with thirty-three deaths occurred in the United States from November 1929 to May 1930. These cases occurred in fifteen states and the District of Columbia and do not include sixteen laboratory infections with two deaths, nor twelve probable cases which were removed from two merchant ships entering United States ports following exposure, aboard ship, to parrots purchased in Germany and Brazil. In California, from December 1929 to January 1930, ten cases of psittacosis with two deaths were reported. One of these fatal cases occurred on shipboard en route from Los Angeles to Honolulu. It was because of the appearance of the disease in the United States that President Hoover, early in 1930, issued an executive order under which the importation of parrots from foreign countries was forbidden. This order was modified October 31, 1930.

The Epidemiological Report of the Health Section of the Secretariat of the League of Nations for April 15, 1930, carries a most extensive report on psittacosis. Although it is a rare disease, mention of it has appeared in medical reports for at least fifty years. Extensive outbreaks occurred in Paris in 1892, with fifty-one cases and sixteen deaths. A severe outbreak occurred in Germany in 1909; a similar outbreak in Scotland in 1924; and one case occurred in the United States in 1928.

Most epidemics of psittacosis are small outbreaks which are confined to members of the same family and to persons living in the same house. Most cases are in persons who have been in direct contact with sick parrots or birds belonging to that group. It is said that the attack is more serious when contracted from a bite or peck by the bird. The incubation period is generally from eight to fifteen days and the onset is sudden. The beginning symptoms may be chills, vomiting and headache, malaise, diarrhea or constipation. Pulmonary symptoms are always present and the pneumonia is atypical. The pulmonary symptoms, however, may not be the immediate cause of death. A typical symptom is the almost complete absence of expectoration even when the pulmonary symptoms are serious. Sputum, when present, is sometimes rusty but is never blood-stained, as in typical pneumonia. The nervous symptoms are marked. Psittacosis patients are pale and weak. Their cheeks are not flushed and the respiratory silence is more typical than it is in pneumonia. The history of contact with a sick parrot is an important link in the chain of evidence which leads to diagnosis of the disease.

The Hooper Foundation for Medical Research, Dr. Karl F. Meyer, director, is cooperating with the State Department of Public Health in the laboratory work connected with the investigation into psittacosis in California.

BOARD OF MEDICAL EXAMINERS OF THE STATE OF CALIFORNIA

By CHARLES B. PINKHAM, M. D.

Secretary of the Board

News Items, March 1932

The 1931 annual report of the Board of Medical Examiners was recently filed with Governor Rolph. Five hundred and fifty-seven licenses of various classes were issued of which 505 were physicians and surgeons. Written examination records show that 93 per cent of the total number of applicants passed. Fifty-four medical schools, both in the United States and abroad, sent 336 applicants before the board for written examination. One hundred and seventy-three reciprocity certificates were issued, Illinois sending the largest number, Minnesota second, Ohio and Iowa tying for third. Thirty-nine California physicians and surgeons sought registration in other states. Thirty-four licentiates were called before the board for various indiscretions, the larger number being charged with narcotic violation. Sixteen licenses were revoked, four suspended, four placed on probation, eight dismissed, and two cases unfinished. The legal reports, both north and south, show continued activity in discouraging violations of the law. Comment was made that "Many of the worst fakers in the United States come to California to prey on those who are afflicted with some bodily ill, and unfortunately, no matter how utterly ridiculous the system of treatment may be, there are always many who fall for it and lose not only their money but, in many cases, their chance for life itself by delaying the proper treatment too long. This is especially true of cancer sufferers. They have been singled out as the legitimate prey of scores of fakers who, with some mysterious but worthless nostrum or method of treatment, obtain hundreds of thousands of dollars annually from these poor sufferers without giving anything of value in return." Two hundred and thirty-eight licentiates passed to the Great Beyond during the year.

"Dr. Edward M. Pallette, prominent Los Angeles physician and former assistant city health officer, was appointed a member of the State Board of Health by Governor James Rolph, Jr., yesterday, according to Sacramento dispatches . . ." (*Los Angeles Illustrated Daily News*, January 20, 1932).

At the regular meeting of the Board of Medical Examiners held in Los Angeles, February 1 to 4 inclusive, the following changes were made in the status of licentiates: George H. Bland, M. D., Fresno, license revoked February 2, 1932, for violation of probation re narcotics; William B. Hamilton, M. D., license revoked February 2, 1932, based on revocation of his Utah license on which he obtained his California reciprocity license; Clarke S. Smith, M. D., Oakland, license revoked February 2, 1932, for violation of the terms of his probation re narcotics; Alfred G. R. Castles, M. D., Los Angeles, placed on probation for five years, February 2, 1932, based on advertising contrary to law; Cary A. Snoddy, M. D., Vallejo, found guilty February 2, 1932, in connection with narcotic indiscretions, was placed on probation for a period of five years without narcotic privileges. Aubrey H. Staples, M. D., Oakland, found guilty of narcotic indiscretions, was on February 2, 1932, placed on probation for a period of five years without narcotic privileges; on February 2, 1932, the board found Maurice J. Pullman, chiropodist, Los Angeles, guilty of advertising contrary to law, and deferred imposition of penalty until the July meeting; the revoked license of Roy L. Buffum, M. D., Long Beach, was on February 2, 1932, restored, and he was placed on probation for a period of five years without alcohol or narcotic privileges; the revoked license of John H. Seiffert, M. D., San Diego, was restored February 1,

1932, and he was placed on probation. The board approved as institutions for the treatment of narcotic addicts the Angelus Hospital, Los Angeles, French Hospital, San Francisco, and the Neal Institute, San Francisco, under the provisions of the state narcotic law and Section 14, Subdivision 6 (a) of the Medical Practice Act. Approval was denied the Narcotic Hospital, Inc., Ltd., of Los Angeles. Sixty-four applicants reported for written examination, including three chiropodists and one midwife.

An individual reported as "Dr. W. S. Cravens," recently returned from Reno, Nevada, to Modesto on a bad-check charge, is reported by the Bureau of Criminal Identification and Investigation as having quite a police record, commencing in 1920 when he was an inmate of the United States penitentiary at Leavenworth, Kansas. He is reported to use the aliases Dr. I. R. Calkin, Louis Bressette, William J. McFarland, I. R. Calkins, Scott C. Craven, Dr. J. R. Calkins, William Scott Clinton Craven, and Dr. E. J. Simmons. We find no evidence of his medical credentials.

It is evident that many licentiates are unaware of the law requiring immediate report to the police of gunshot and knife wounds, judging from the experience of Dr. Victor Campbell, Palm Springs, who, according to the *Riverside Enterprise* of January 30, 1932, was recently fined \$250 by Justice Lee D. Childers for his failure to report treatment of gunshot wounds suffered by "Leslie Smith, Los Angeles murderer . . . in a gun fight with police in Los Angeles. . . . Doctor Campbell treated Smith in his office the night after the murder of Officer Gillespie in Los Angeles during a holdup. . . . He admitted that he did not notify police and sheriff officers by telephone and by writing as is required by law. . . ."

Tsuneyoshi Koba, alias Tsuneyoshi Kola, alias Tsuneo Kuba, mentioned in the 1929 annual report of the Board of Medical Examiners in connection with fraudulent medical diplomas, was recently reported as having pleaded guilty in New York City to a charge of attempted forgery in connection with alleged medical credentials and was sentenced to one to three years. (Prior entry, February, 1930; September, 1931.)

According to reports, a jury in Los Angeles on January 30, 1932, found H. Allen Peters guilty of violation of the Medical Practice Act. (Previous entry, June, 1929.)

Reports relate that a jury in a Los Angeles court found W. I. Schuster, licensed chiropractor, guilty of violation of the Medical Practice Act, and he was sentenced to pay a fine of \$100 or serve fifty days in the city jail. Notice of appeal was filed.

K. Tanaka was reported to have pleaded guilty in San Pedro on January 8, 1932, to a charge of violation of the Medical Practice Act, and sentenced to serve sixty days in jail, sentence being suspended six months on condition that he no longer violate the Medical Practice Act.

"Pleading guilty to a charge of violating Section 17 of the California Medical Practice Act, Frank Wegge, forty-two, yesterday received an unusual sentence from Municipal Judge Joseph L. Call in the San Pedro court. The judge ruled that the defendant be given a 180-day sentence, the first five days to be served in jail and the balance of 175 days to be on parole. Wegge is an assistant to a local physician. . . ." (San Pedro *News-Pilot*, January 19, 1932).

New Radium Find in Canada May Break Belgian Monopoly.—That radium to the value of several millions of dollars, just discovered in Canada, will break the Belgian world monopoly of this precious substance and speed up the relief of cancer victims is the opinion of competent mining experts in Washington.

The pitchblende treasure bearing \$7000 worth of radium in every ton of ore, discovered by Gilbert LaBine and Shirley R. Cragg, airplane prospectors, of the El Dorado Mines Corporation at Labine Point in the Great Bear Lake region, is equal in richness to the best ores of the Belgian Congo, which since 1922 have driven all competitors, including the United States, from the market.

The new ore is here described by geologists as "a very substantial deposit of high-grade material" yielding one three-hundredths of an ounce of radium per ton. Twenty tons have already been shipped on a fur steamer of the Mackenzie River and forty more tons mined ready for shipment at a cost which compares favorably with Belgian freight charges on the long passage from Africa to the refineries in Europe.

Hundred-pound lumps were actually picked up on the surface. The radium from these will yield \$70,000 a gram, whereas the most valuable emeralds fetch only \$5000 a gram. Silver ore yielding \$300 a ton has been found alongside.

The Canadian discovery, consisting apparently of several thousand tons of ore, will add greatly to the world's present 600 gram total supply of radium. Treatment of cancer, until now hindered by the prohibitive prices, will be helped.—*Science News Letter*, November 14, 1931.

Physiologist Appraises Doctor Warburg's Work.—A scientist's estimate of the achievements of Dr. Otto Warburg in recognition of which he has been chosen for the Nobel Prize in medicine and physiology for 1931 are contained in a statement made to Science Service by Dr. W. H. Howell, chairman of the Division of Medical Science of the National Research Council. Doctor Howell was for many years director of the School of Hygiene and Public Health of the Johns Hopkins University, Baltimore. He said:

"The selection of Professor Otto Warburg for the Nobel Prize in medicine and physiology for 1931 will be cordially approved by American physiologists. He is well known and esteemed in this country for his fine work upon cell metabolism.

"His investigations upon the respiration or mechanism of oxidation in the living cell are of fundamental importance. He has shown that the cell depends upon the ion contained in it to utilize the oxygen that is brought to it by the blood. The ion exists in the cell in a special form, an iron porphyrin compound, which is present in very minute concentration, perhaps one part to a million, but it is very active and functions as a catalyst or ferment which takes up the oxygen and then gives it to oxidizable substances within the cell—in such small amounts its nature could not be detected by ordinary chemical means, and Professor Warburg devised a delicate spectrographic method, depending upon the absorption bands given by its compound with carbon monoxid.

"Another significant contribution was his study of the metabolism of the cancer cell as compared with the normal cell. He was able to show that malignant growths have a small respiration but contain relatively large amounts of lactic acid. His work figures largely in all discussions upon the cause of cancer."—*Science News Letter*, November 7, 1931.

Some Parents Are So Careless.—"Speaking of signs," writes W. P., "I remember once standing in front of a grocery store and noticing the sign, 'A Swindler,' on the window. Entering, I asked the proprietor if it wouldn't look better if, instead of 'A,' he printed his full Christian name.

"'No,' he said, 'it would look worse. My first name is Adam.'"—*Boston Transcript*.